SIEMENS

ARCADIS

SP

Configuration

System

Configuration VB13 C

Valid for
- ARCADIS Varic
- ARCADIS Orbic
- ARCADIS Orbic with 3D
- ARCADIS Avantic

© Siemens AG 2007
The reproduction, transmission or use of this document or its contents is not permitted without express written authority. Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Print No.: SPR2-320.843.02.05.02
Replaces: SPR2-320.843.02.04.02

English
Doc. Gen. Date: 05.07

Document revision level

The document corresponds to the version/revision level effective at the time of system delivery. Revisions to hardcopy documentation are not automatically distributed.

Please contact your local Siemens office to order current revision levels.

Disclaimer

The installation and service of equipment described herein is to be performed by qualified personnel who are employed by Siemens or one of its affiliates or who are otherwise authorized by Siemens or one of its affiliates to provide such services.

Assemblers and other persons who are not employed by or otherwise directly affiliated with or authorized by Siemens or one of its affiliates are directed to contact one of the local offices of Siemens or one of its affiliates before attempting installation or service procedures.

Table of Contents 3

1 Definitions and Abbreviations 6

Overview . . . 6

2 General 8

General information . . . 8

Reboot, restart and shutdown . . . 9

3 Country-specific Settings 10

Country-specific keyboard layout and user interface . . . 10
- Image Text Editor . . . 11

4 Syngo 12

Service software . . . 12
- Open the service software . . . 12
- Configuration . . . 13

Local host . . . 16
- Site info (1) . . . 16
- System . . . 17
- Service . . . 18
- Customer and Address . . . 18
- Site info (2) . . . 19
- TCP/IP LAN . . . 20
- Users . . . 22
- Monitor type . . . 23

Security . . . 24
- Settings . . . 24

Service . . . 26
- Mail . . . 26
- FTP . . . 28
- Auto transfer . . . 31
- Event log . . . 31
- Backup/restore . . . 33
- Licensing . . . 33

DICOM . . . 35
- General . . . 35
- Character set . . . 37
- Offline devices . . . 37
- Network nodes . . . 39
- Print devices . . . 42
- HC overview . . . 47
- LUT files . . . 48
- HIS/RIS nodes . . . 50

Import/export . . . 54
- Directories . . . 54

EPRI . . . 57
- Server . . . 57

External devices . . . 58
Paper printer . . . 58
Applications . . . 60
Pat. registration . . . 60
Viewer . . . 61
CorRea . . . 62
MPPS . . . 63
Worklist results . . . 63
Help/documentation . . . 64

5 Imaging System 66

Imaging system . . . 66
Valid main system . . . 66
Application fields . . . 66
Examination set configuration . . . 66
Edge enhancement filters . . . 66
Windowing LUT . . . 67
Logarithm LUT . . . 67
Metering section file . . . 68
Display settings . . . 69
Subtraction parameters . . . 69
Motion detection . . . 70
Power off parameters . . . 71
Brightness control . . . 71
Camera . . . 72
Circle mask . . . 72
Hardcopy configuration . . . 72

6 ARCADIS Main System Configuration 73

Configuration . . . 74
Main system . . . 74
Load counter . . . 75
Options . . . 75
Current limitation . . . 76
Buzzer . . . 76

7 Avantic Main System 77

Configuration . . . 78
Main System . . . 78
Image Intensifier . . . 78
Load Counter . . . 79
Options . . . 80
Current Limitation . . . 81
Buzzer . . . 81

8 ARCADIS Orbic 3D 82

3D Adjustment . . . 83
Potentiometer . . . 83
Orbital movement . . . 84

3D calibration 86
Orbic 3D 86
Calibration with a navigation system. 87

9 ARCADIS Orbic 3D with navigation 88

3D Navigation 88
Configuring a DICOM node. 88

10 Backup 91

Backup of parameter changes 91

11 Network checklist 92

. 92
Person responsible for network configuration at customer site. 92
System network data 92
Network data for HIS/RIS network partner (only with HIS/RIS option) 93
Network data for reporting console/archiving system 94
Network data for reporting console/archiving system 95

12 Changes to Previous Version 96

Overview

Abbreviation	Definition
ACR-NEMA	American College of Radiology - National Electrical Manufacturers Association
BIOS	Basic Input Output System, lowest level of PC configuration
AET	Application Entity Title - name of the DICOM service that communicates either as the user (SCU) or the provider (SCP).
CD	Compact disc
CDR	Compact Disc Recordable
DVD	Digital Video Disc
COMP/ON	Computer on
CSE	Customer Service Engineer
DICOM	Digital Image Communication in Medicine (ACR-NEMA standard)
DHCP	Dynamic Host Configuration Protocol - procedure for assigning numeric IP addresses to nodes, in which blocks of addresses are leased to clients on a first-come, first-served basis. Typically, DHCP is combined with WINS so an IP address is both dynamically assigned and automatically associated with a domain name. This can be combined with DNS, resulting in a dynamically assigned numeric IP address that is automatically associated with both NetBIOS and Internet names.
DNS	Domain Name Services - used for address parsing with numeric IP addresses being linked to names in the Internet format.
FTP	File Transfer Protocol - a client-server application that transfers files from one computer to another.
Gateway	Controls data traffic between two networks above the network layer.
HIS	Hospital Information System
LAN	Local Area Network (in this case: always Ethernet)
LMHOSTS	Address parsing method in which numeric IP addresses are statically linked to NetBIOS names. The LMHOSTS file is checked to determine whether the name is addressed.
Navigator	Main operating console

MC	Main Console
MOD	Magneto-Optical Disk
NetBIOS	Network Basic Input Output System - contains various network services and program interfaces. NetBIOS services run on protocols such as TCP/IP.
NIC	Network Interface Card - an expansion card that provides a physical connection to the network.
OI	Operating Instructions
PB	Patient Browser
PPP	Point-to-Point Protocol - data connection and network protocol for serial connections (such as dial-up modems).
RAS	Remote Access Services - a Windows NT service that supports dial-in and dial-out connections using modems and ISDN.
RIS	Radiology Information System
Router	A multi-port computer or a dedicated hardware component that examines network layer addresses for data packets and sends them to a different network as appropriate.
SC	Satellite Console
SCU	Service Class User
SCP	Service Class Provider
SYS/ON	System on (meaning the complete system)
TCP/IP	Transport Control Protocol/Internet Protocol - the standard protocol for networks.
UI	User Interface
USC	Uptime Service Center
URL	Uniform Resource Locator
VPN	Virtual Private Network
WINS	Windows Internet Name Service - used for address parsing with IP addresses being linked dynamically to NetBIOS names. DNS can be combined with WINS.
WIP	Work In Progress

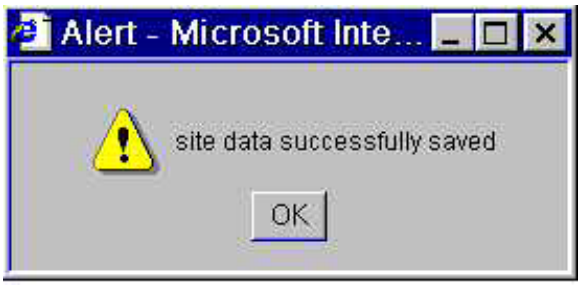
General information

NOTE

Depending on the progress of the configuration, the "Next" button might also be displayed as the "Finish" button.

NOTE

Once the <Save> button has been selected in the individual screens, the message "..... successfully saved" appears following a successful save .



- **Select "OK".**

NOTE

If any problems arise when making changes in the Service UI, attempt to resolve them first by powering the system completely off and then powering it on again.

NOTE

A shutdown is required after servicing and prior to handing over to the customer. Hibernation alone (starting with version VB13C) is not sufficient.

Reboot, restart and shutdown

NOTE

To activate changes in the system, the system must always be shut down; i.e., the complete system must be switched off and switched back on again.

A shutdown must always be performed at the end of the configuration process. Hibernation alone (starting with version VB13C) is not sufficient.

If one of the following messages appears, proceed as described in the note.

NOTE

Restart

Microsoft Internet Explorer
a restart of application SW is necessary to make changes valid!
Press OK to launch restart or select Cancel
OK
Cancel

Reboot

Microsoft Internet Explorer
A reboot is necessary to make changes valid!
Press OK to start shutdown or select Cancel.
OK
Cancel

- **If one of the above windows is displayed, click <OK>.**

Reboot

Alert - Microsoft Internet Explorer
The change is only valid and correctly displayed after reboot!
Use only home button of service ui to start shutdown and make new hostname valid.
OK

- **If this window is displayed, click <OK>.**
- **Click on "Home".**

Country-specific keyboard layout and user interface

1. In the "Configuration" panel double-click “Regional and Language...”.
2. Select “Regional Options”.
3. Under “Standards and formats”, select the appropriate language from the drop-down menu:
   - English (United States)
   - German (Germany)
   - French (France)
   - Spanish (Spain)
4. Under “Location”, select your corresponding location.
5. Click <Apply>.

NOTE **English / US is the default setting. As a result, “Apply” is not available.**

6. Select the “Languages” tab card and click <Details...>.
7. Under “Installed services” click “Add...”
   ➪ The window “Add input language” is displayed.
8. Under “Installed services”, the following languages can be selected:
   - English (United States)
   - German (Germany)
9. Under “Keyboard layout / IME”, select the appropriate keyboard language from the drop-down menu:
   - US
   - United Kingdom
   - German
   - Swedish
   - Portuguese
   - Italian
   - French
   - Spanish

NOTE **If a keyboard language (e. g. “US”) is displayed under “Installed services”, it disappears from the “Keyboard layout/IME” drop-down menu.**

NOTE **The correct keyboard language can also be found in the delivery note from the factory.**

10. Click <Apply>.
11. Click <OK>.

12. Click <OK>.
    ➪ The following is displayed when values have been changed:
    "The regional settings have been changed.
    Therefore a restart of the application is necessary.
    Do you want to restart the application now?"
13. Click <OK>.
    ➪ This will apply the settings and the system restarts.
    ➪ Alternatively, you can shut down the system via <Options>-<End Session>-<Shutdown System>.

Image Text Editor

- Select "Options" on the task card.
- Select "Configuration".
- Double-click "Image text editor".
- Under "View name", select "XAImage".
- Click "v" to deselect "Software version".
- Click "Apply".
- Under "View name", select "ARCADISAcqView".
- Click "Customized text".
- Click "v" to deselect "Scale bar".
- Click "v" to deselect "Orientation labels".
- Click "v" to deselect "Image date".
- Click "v" to deselect "Image time".
- Click "v" to deselect "Image number".
- Click "Apply".
- Click "OK".
- Close the Configuration panel.

Service software

Open the service software

- Under Options, select "Service".
- Select "Local Service".

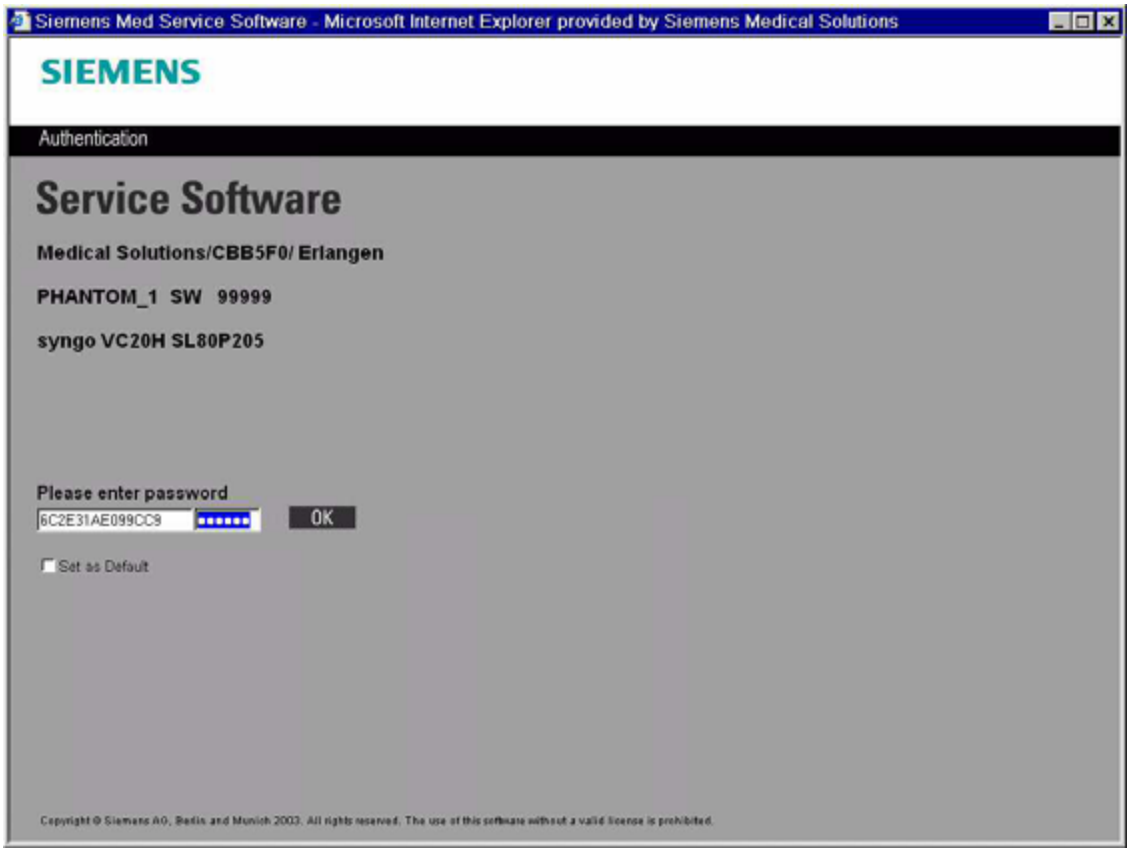


Fig. 1: C06_5_03

- Enter the service key under "Please enter password".
- Select "Set as default" and confirm with "OK".

  ➪ The Service Home menu is displayed.

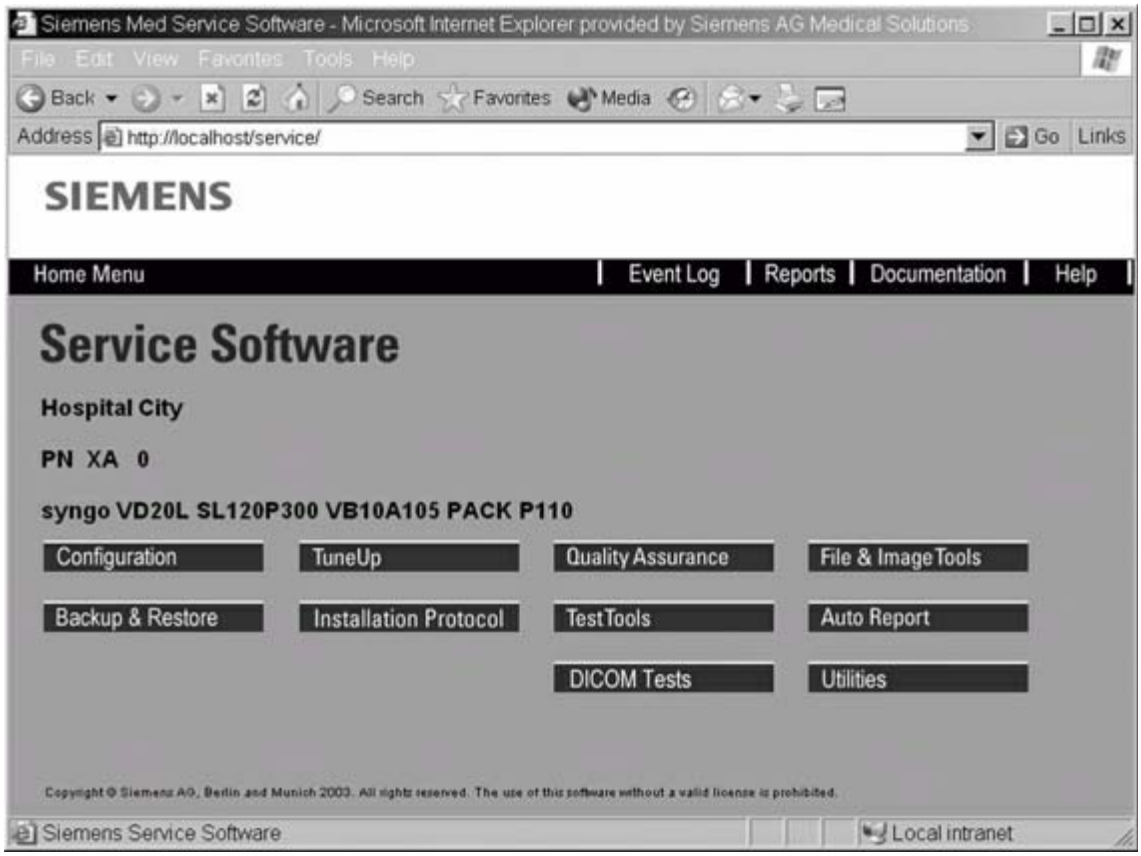


Fig. 2: Home Menu

Configuration

NOTE	**During "Initial Setup", you continue to the next page either with "Next" or ">".**

NOTE	**If a new value is entered for a parameter, click the "Save" button.**

- On the "Home Page", select the "Configuration" menu button.
  - ➪ If "Restore" was not performed, an "Initial Setup" has to be performed.

Fig. 3: Configuration system type

System type	Depending on the system, select ARCADIS Varic, ARCADIS Orbic, or ARCADIS Avantic accordingly.

The following system options can be selected.

Attached to network	TCP/IP LAN (Local Network) for local system
DICOM print devices	DICOM basic print service for laser cameras
DICOM offline devices	DICOM media storage on offline media such as MOD and CD-R
DICOM networking	DICOM storage and query/retrieve to remote network nodes
DICOM HIS/RIS	DICOM basic worklist for radiology (hospital) info. systems
Image import/export	Import/export DICOM images from/to the file system
Paper printer	Format for local printers (LPT1 or USB)

EPRI	Electronic patient record interface
System management	System management agent
Litho report	This enables the litho report function.
Enable help pages	Help pages are displayed between the configuration screens.

- Select the corresponding system options.
  - ➪ “Attached to network” and "Dicom Offline Devices” are permanently selected.
- Click <Next>.

⚠WARNING

Risk of interference during live image acquisition.

Activation of System Management can interfere with live image acquisition.

➪ System Management must not be activated.

Initial setup

- During the initial installation, <Next> has to be selected instead of ">".
  - ➪ Initial Setup occurs during the initial installation only.

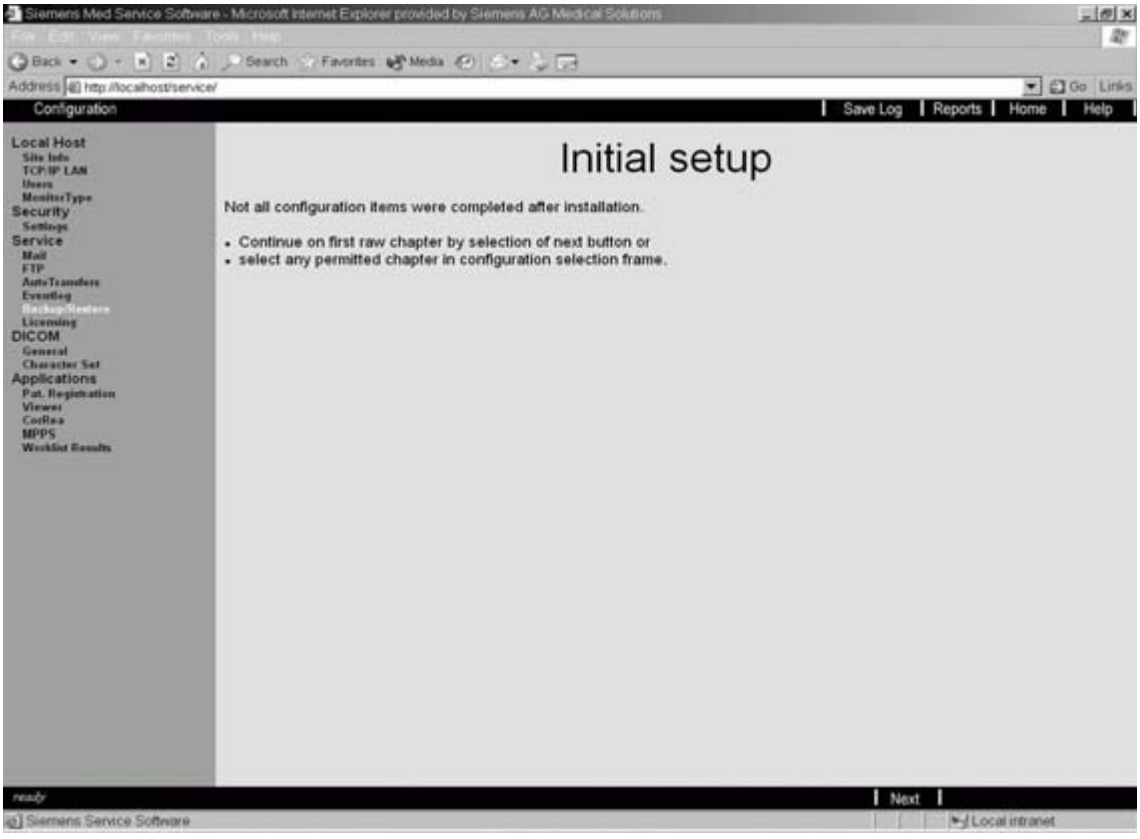


Fig. 4: Service >> Backup/Restore (Inst)

- Click "Next".

Local host

Site info (1)

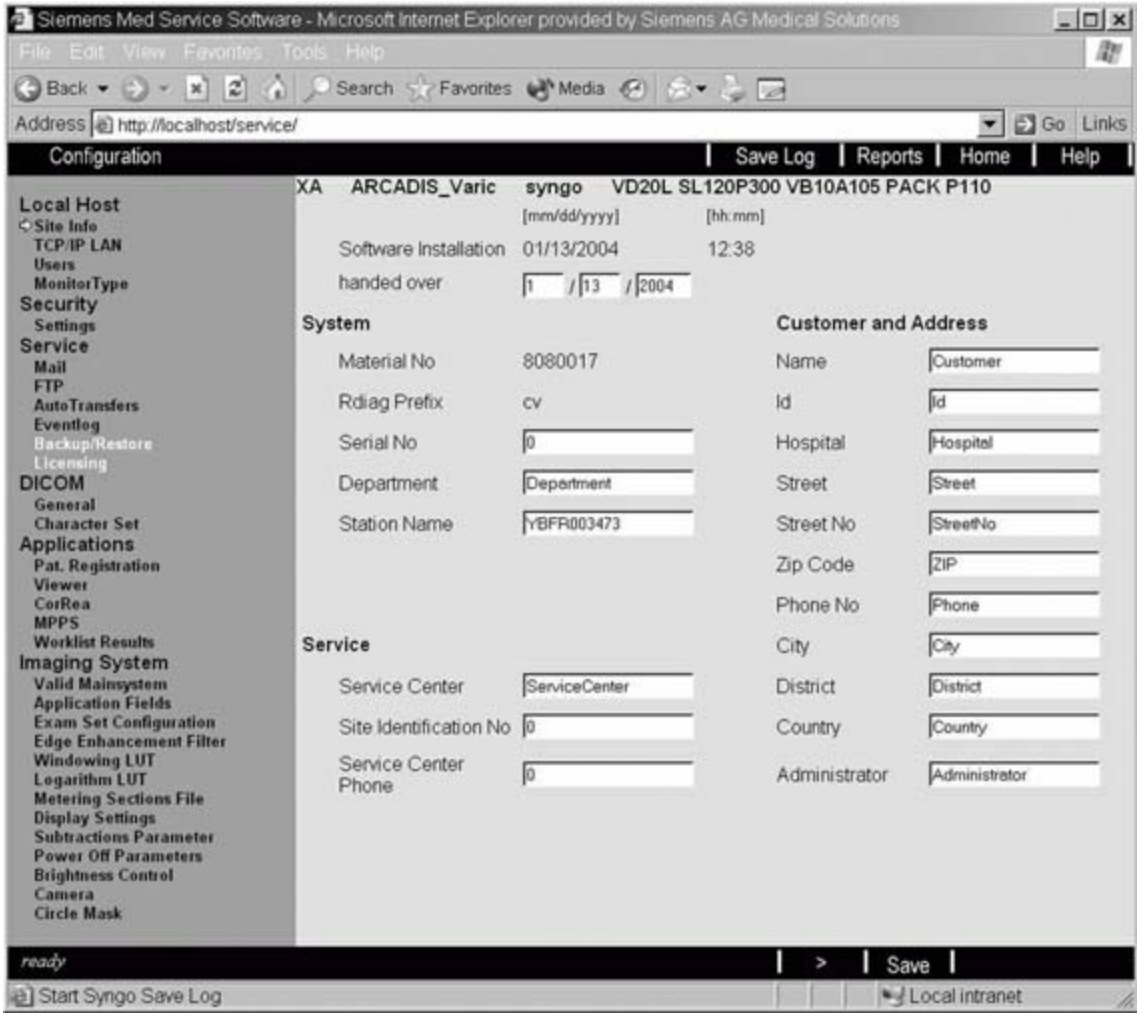


Fig. 5: Local Host >> Site Info 1

Software installation

This date is set automatically during software installation; it cannot be changed.

Handover

- Enter the date and time when the system was handed over to the customer.

System

Material no.

This material no. is entered automatically once the "system model" has been selected in the previous screen.

For ARCADIS Varic, “80 80 017” is displayed under “Material no.”

For ARCADIS Orbic, “80 81 080” is displayed under “Material no.”

For ARCADIS Avantic, “100 48 590” is displayed under “Material no.”

Rdiag prefix

This name is entered automatically once the "system model" has been entered in the previous screen. It is needed to generate a unique name for the remote transfer.

For ARCADIS Varic, "cv" is displayed under "Rdiag Prefix".

For ARCADIS Orbic, "co" is displayed under "Rdiag Prefix".

For ARCADIS Avantic, "av" is displayed under "Rdiag Prefix".

Serial no.

- Enter the system serial number.
  - ARCADIS Varic 10000 to 19999
  - ARCADIS Orbic 20000 to 29999
  - ARCADIS Avantic 31000 to 31999

NOTE	**The serial number is mandatory. It may not include any characters other than numbers from 0 to 9.**

Department

- Enter the name of the department where the system has been set up.

Station name

- Enter the “Station Name” (xxxxx = system serial no.).
  - For ARCADIS Varic: ARCADISOR1xxxxx
  - For ARCADIS Orbic: ARCADISOR2xxxxx
  - For ARCADIS Avantic: ARCADISAV31xxxx

NOTE	**The“Station Name” has to be the same as the name entered under TCP/IP LAN “Computer name”.**

Service

Service center

- Enter the region of the responsible service center.

Site identification number

- Enter the site identification number.

Service center phone

- Enter the telephone number of the relevant service center.

Customer and Address

Name

- Enter the customer name.

ID

- The syntax for this ID differs by country.

Hospital

- Enter the corresponding hospital name.

Street

- Enter the street.

Street no.

- Enter the street no.

Zip Code

- Enter the corresponding Zip Code.

Phone No.

- Enter the corresponding phone number.

City

- Enter the city.

District

- Enter the district.

Country

- Enter the country.

Administrator

- Enter the name of the system administrator.

- Click ">".

Site info (2)

Setting the time zone

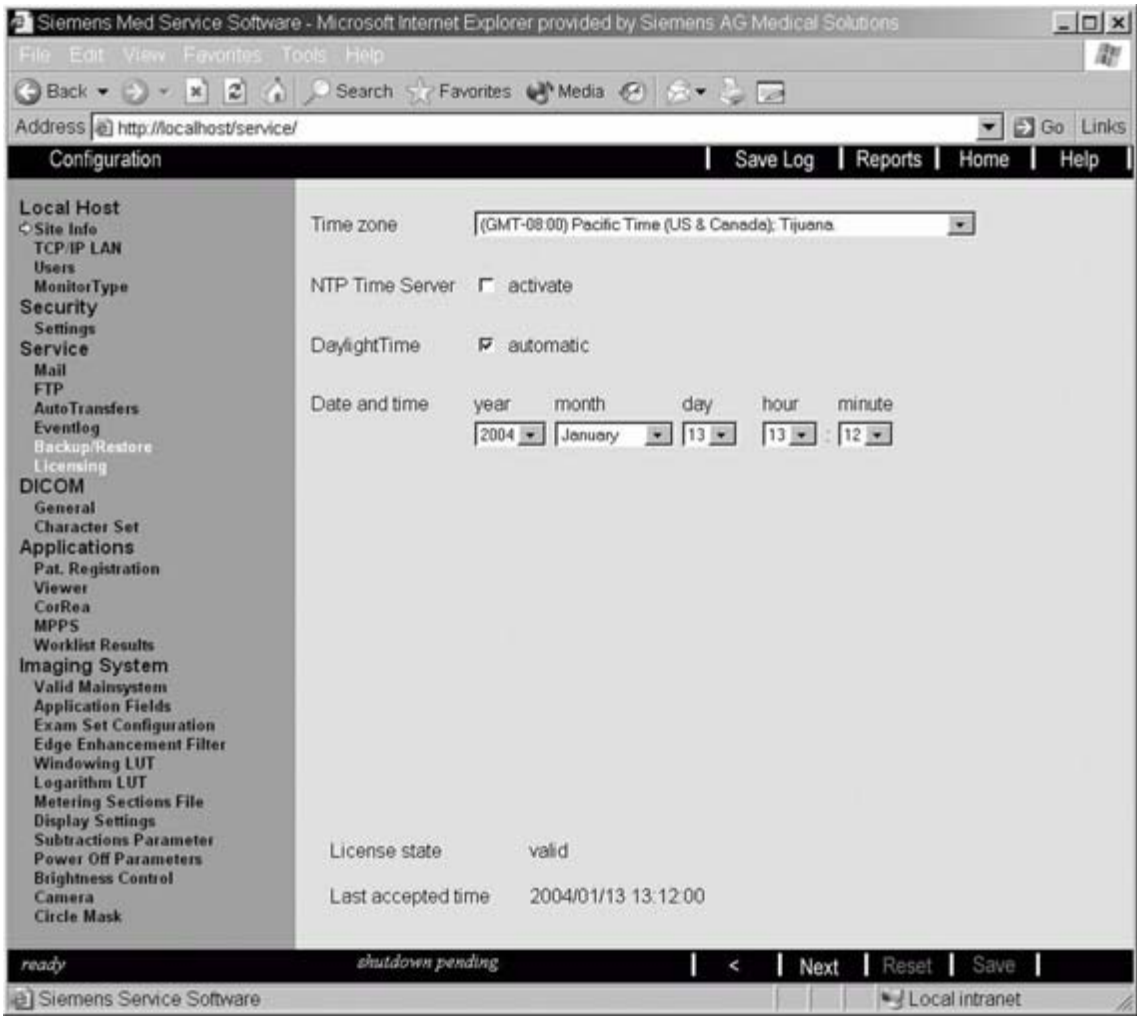


Fig. 6: Local Host >> Site Info 2

Time zone

- Select "Time zone".
  - ➪ Depending on the location of the system

NTP time server

- Do not select "NTP time server".
  - ➪ If the customer has requested that "NTP Time Server" be selected, you must also enter the IP address of the NTP server.

Daylight time

- Select "DaylightTime automatic".
  - ➪ If the NTP time server was activated, these values are automatically accepted and no setting can be made.
- Select the values for "Date and time".

TCP/IP LAN

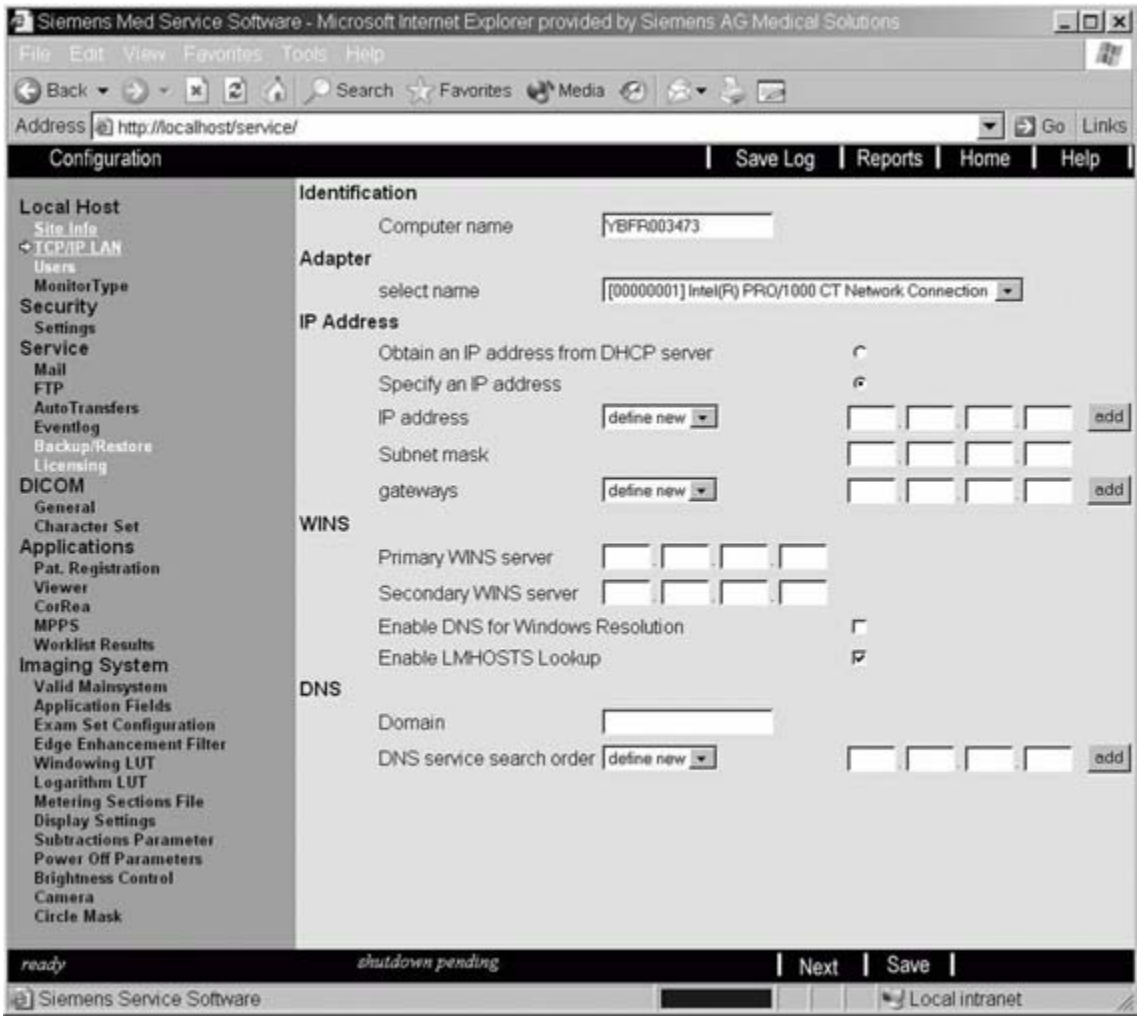


Fig. 7: Local Host >> TCP/IP LAN

Identification / Computer Name

- Enter the "Computer Name" (xxxxx = system serial no.):
  - For ARCADIS Varic: ARCADISOR1xxxxx
  - For ARCADIS Orbic: ARCADISOR2xxxxx
  - For ARCADIS Avantic: ARCADISAV31xxxx

NOTE	**The"Computer Name" has to be the same as the name entered under Site info "Station name".**

Adapter / Select name

- Select " [1] Intel (R) PRO/ 1000 CT Network Connection" under "select name".

Obtain an IP address from the DHCP server

- Do not select "Obtain an IP address from DHCP server".

NOTE	**ARCADIS systems have not been released for use with a DHCP server.**

Specifying an IP Address

- “Specify an IP address” is permanently selected.

IP address

- Under "IP address", enter a valid IP address to identify the system in the network. Contact the network administrator to obtain a valid IP address.

NOTE	**Only one IP address may be entered.** **If “Factory Default” IP address 192.xxx.x.x is entered, it has to be deleted before the new IP address can be entered.**

Subnet mask

- The subnet mask indicates the sections into which the address is divided. The data are distributed via the router based on this division. Contact the network administrator to obtain the subnet mask ID.

Gateway

- In order the leave the hospital network, it is necessary to inform the system (ARCADIS) regarding this gateway (router). Contact the network administrator to obtain the gateway address.

WINS

Primary WINS server

- Do not enter anything under "Primary WINS server".

Secondary WINS server

- Do not enter anything under "Secondary WINS server".

Enable DNS for Windows resolution

- Do not select "Enable DNS for Windows resolution".

Enable LMHOSTS lookup

- Select "Enable LMHOSTS lookup".

DNS

Domain

- Do not enter anything under "Domain".

DNS service search order

- Do not select or enter anything under "DNS service search order".

Users

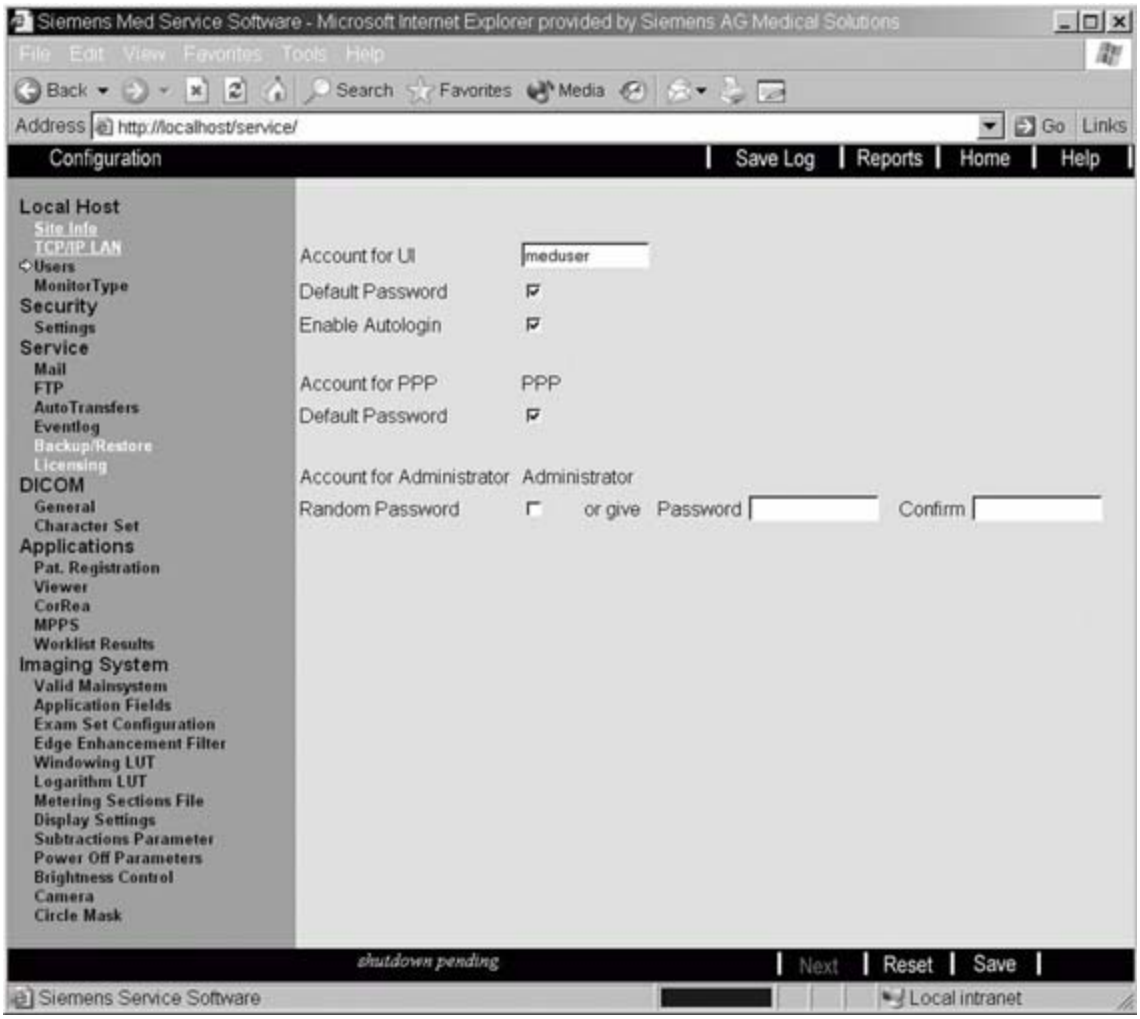


Fig. 8: Local Host >> Users

Account for UI

- meduser

Default password

- Highlight

Enable Auto Login

- Highlight

Account for PPP

- No setting possible.

Default password

- Mark

Account for Administrator

- Random Password Do not mark.
- Password / Confirm: Refer to the knowledge base password list for the default admin password. The admin password can be reassigned at any time but should not be changed.

Monitor type

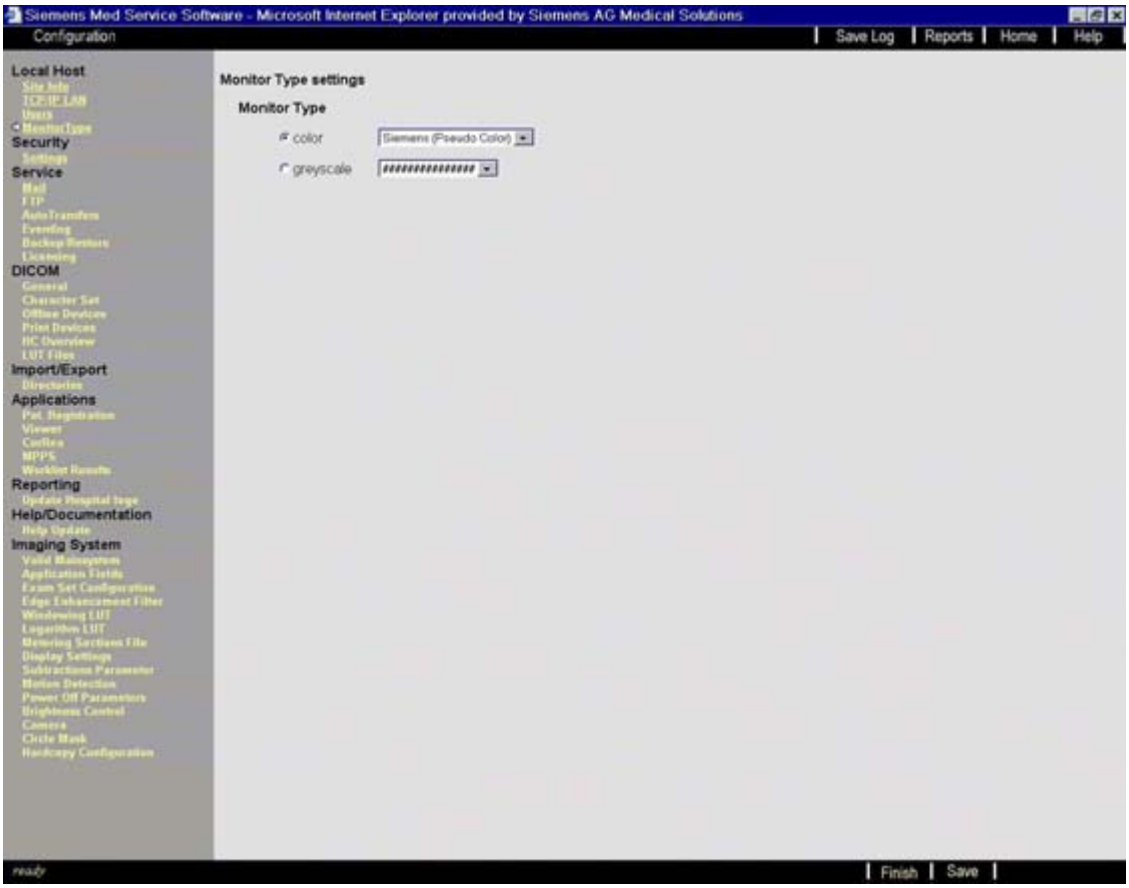


Fig. 9: Monitor Type

Monitor type

- Select "color".
  - ➪ Regardless of whether the monitor is black-and-white or color.
- Select "Siemens (pseudo color)".

Security

Settings

NOTE	**If changes have been made and saved here, they can only be reset by completely reinstalling the system software!**

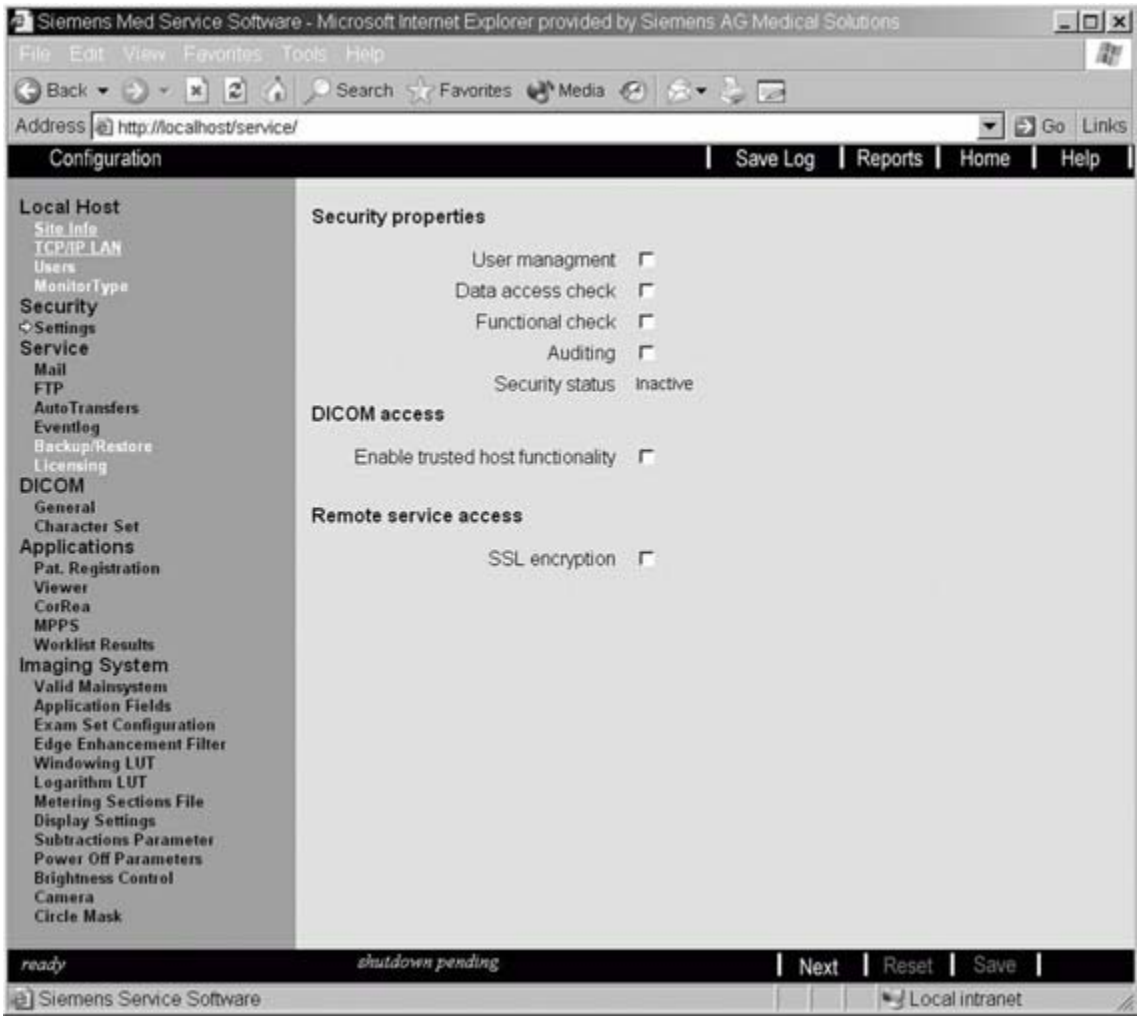


Fig. 10: Security >> Settings

Security properties

User management

- Do not select "User management".

Data access check

- "Data access check" cannot be selected.

Functional check

- Do not select "Functional check".

Auditing

- Do not select "Auditing".

DICOM access

Enable trusted functionality

- Do not select "Enable trusted host" function.

Remote service access

- Do not select "SSL encryption".

Service

NOTE

If the system is connected for remote access, adhere to the document "Installation of Siemens Remote Service" after performing the service software configuration.

NOTE

It is not possible to rename a DICOM node.

Work steps for creating a new DICOM node:

- **Delete old DICOM node.**
- **Perform a system restart via <Options>-<End Session>.**
- **Enter the new DICOM node and restart the system again.**

Mail

This menu item makes it possible to configure the mail target for the "Auto report" function and for the service center defined in the customer user interface under the "Remote service" option. Auto Report is not released for the VB13C software.

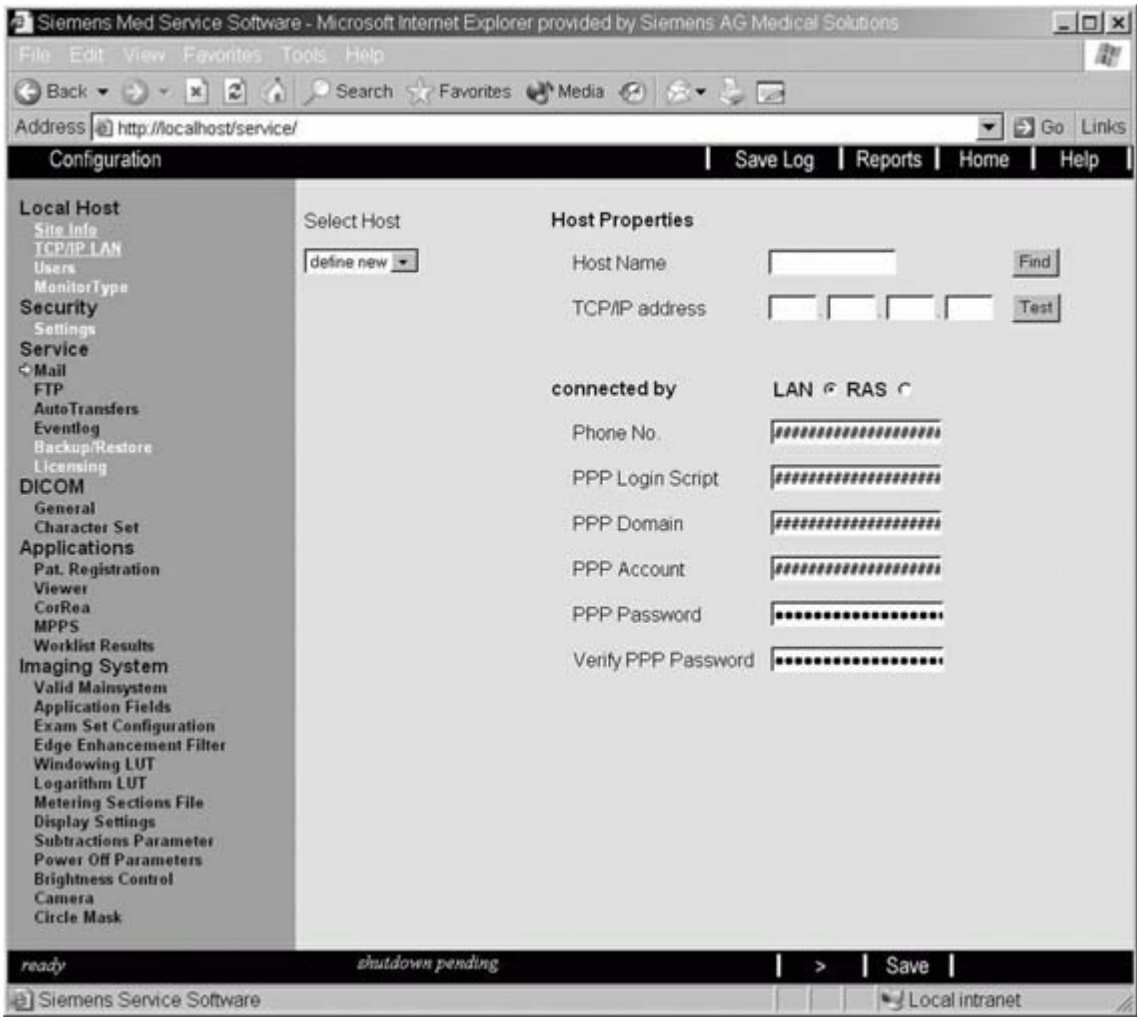


Fig. 11: Service >> Mail 1

Host properties

- No entries are required if not connected for remote access.
- Select ">".

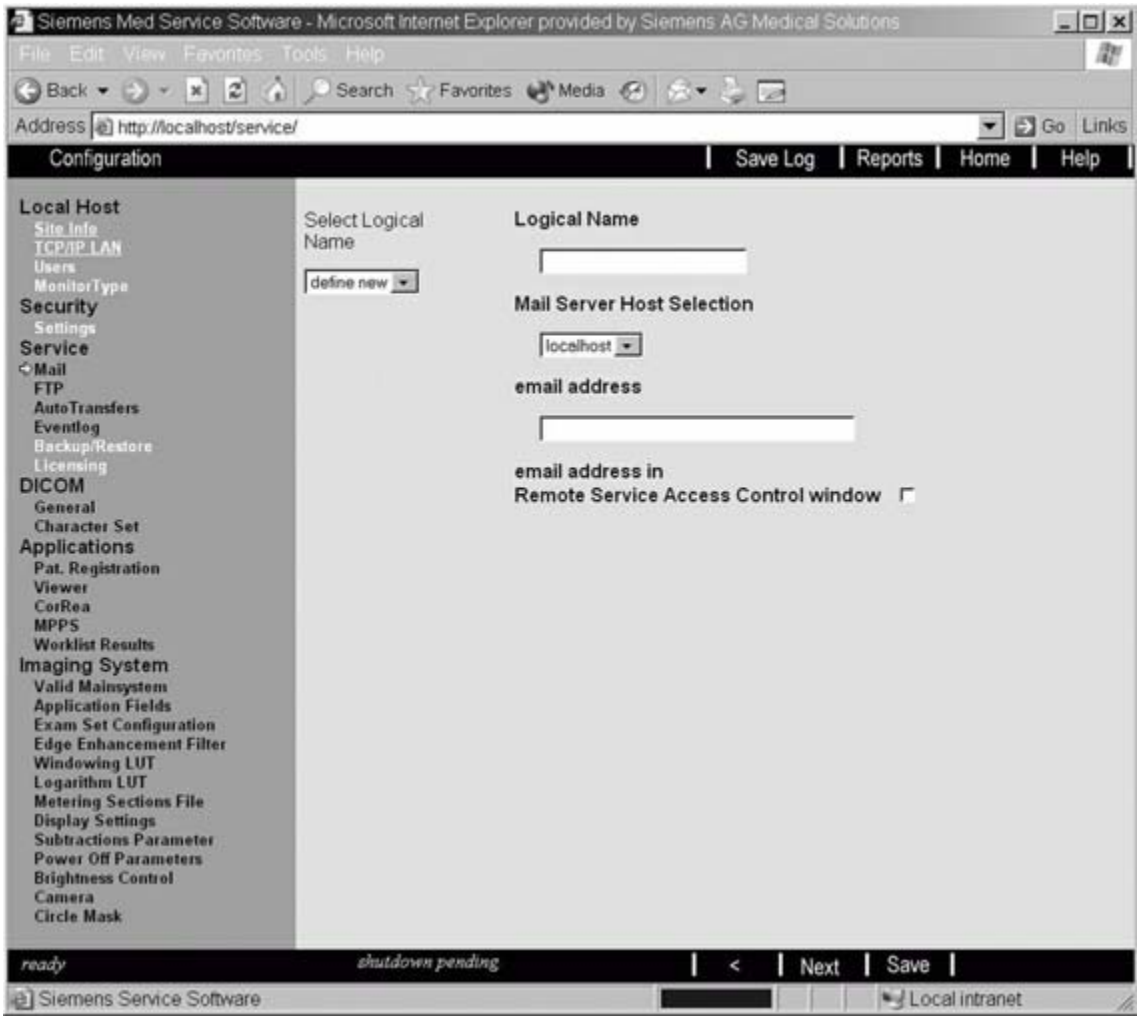


Fig. 12: Service >> Mail 2

Logical name

- No entries are required if not connected for remote access.

FTP

This menu item makes it possible to configure the file transfer target (FTP) for the Auto report and the File&Image tool functions.

A target is comprised of an FTP server and an FTP account on which this server can be reached via LAN (e.g., a router).

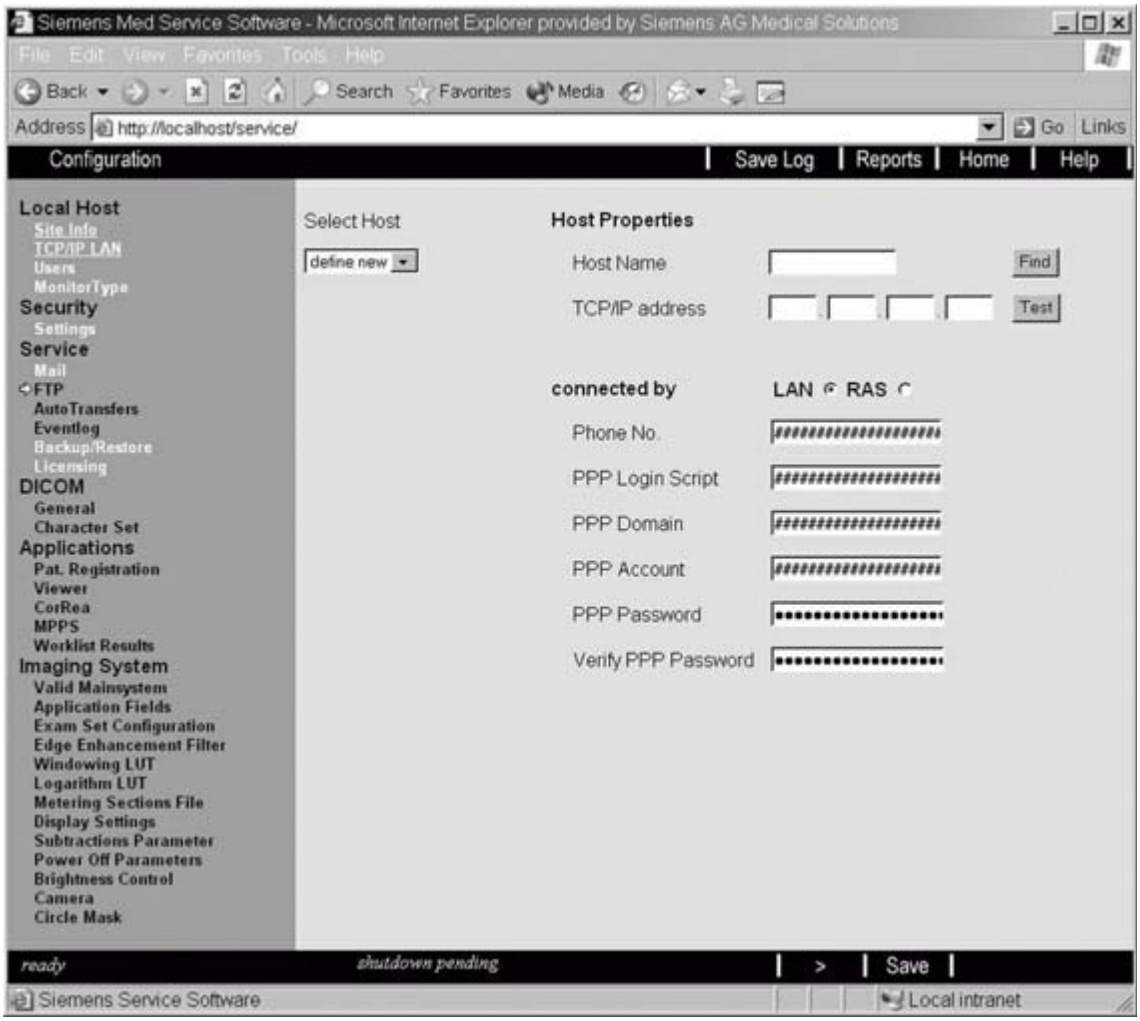


Fig. 13: Service >> FTP 1

Host properties

- Do not make any entries.
- Select ">".

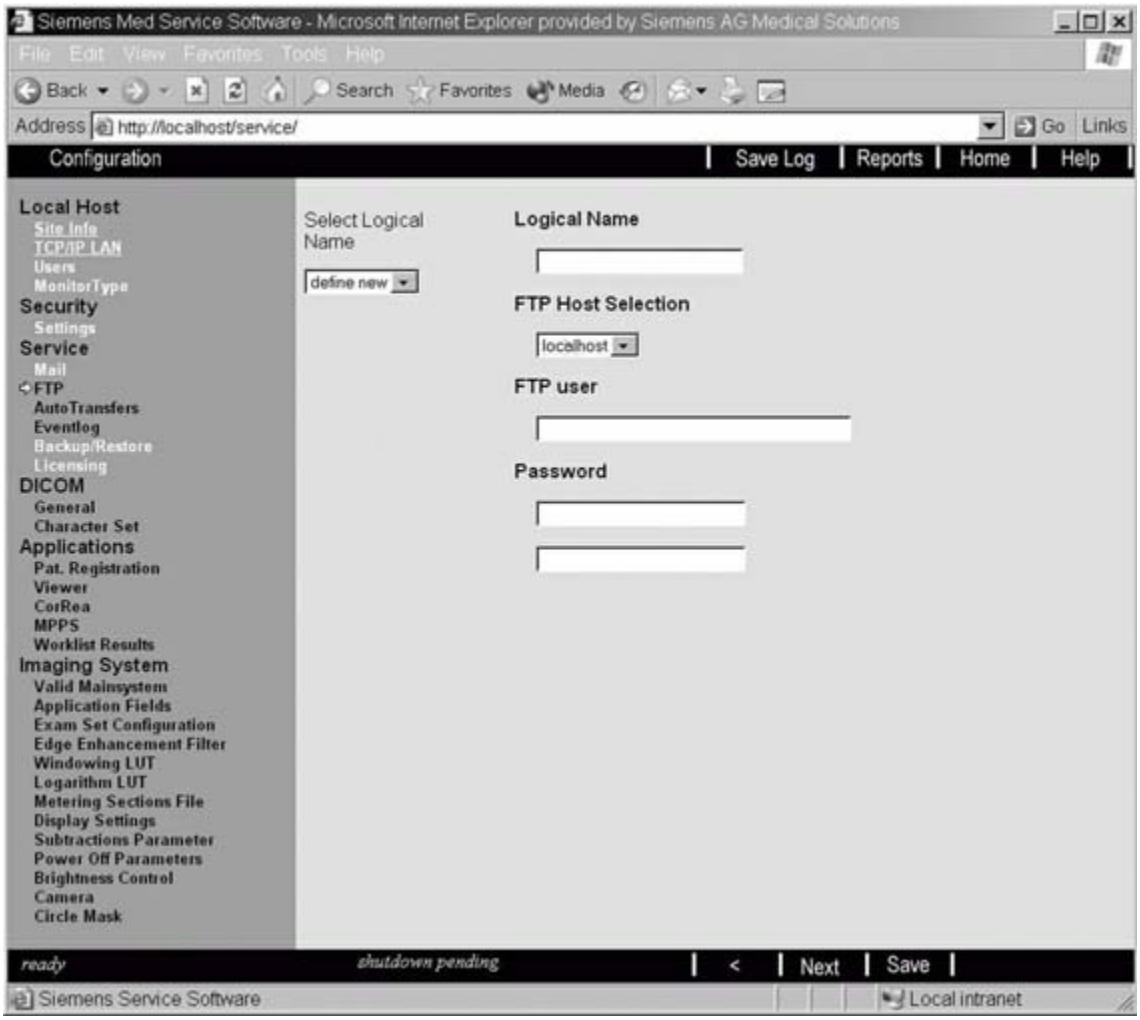


Fig. 14: Service >> FTP 2

Logical name

- Do not make any entries.

Auto transfer

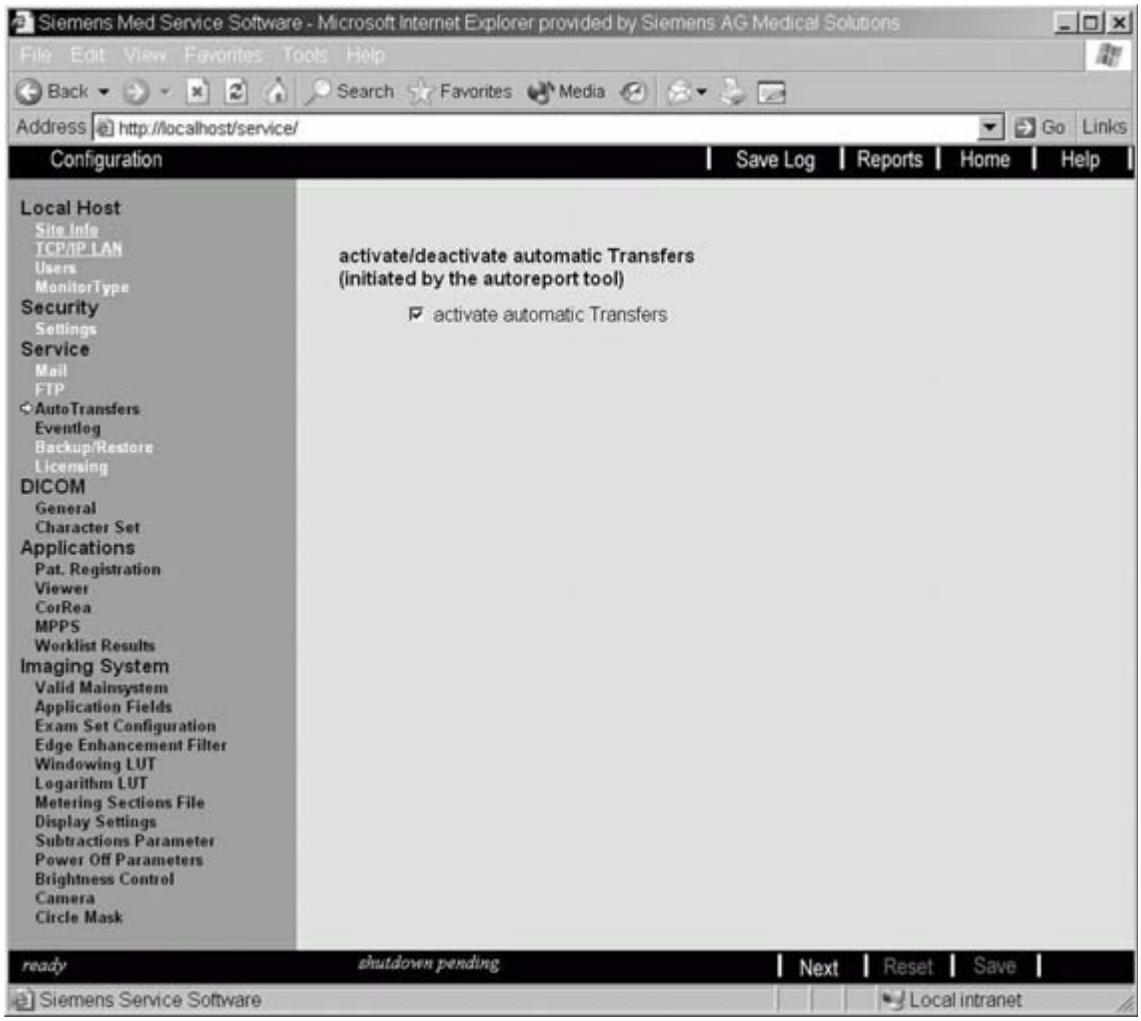


Fig. 15: Service >> Auto Transfers

- Select "Activate auto transfers".

Event log

Using the "Eventlog" function, the content of the service software event log can be changed.

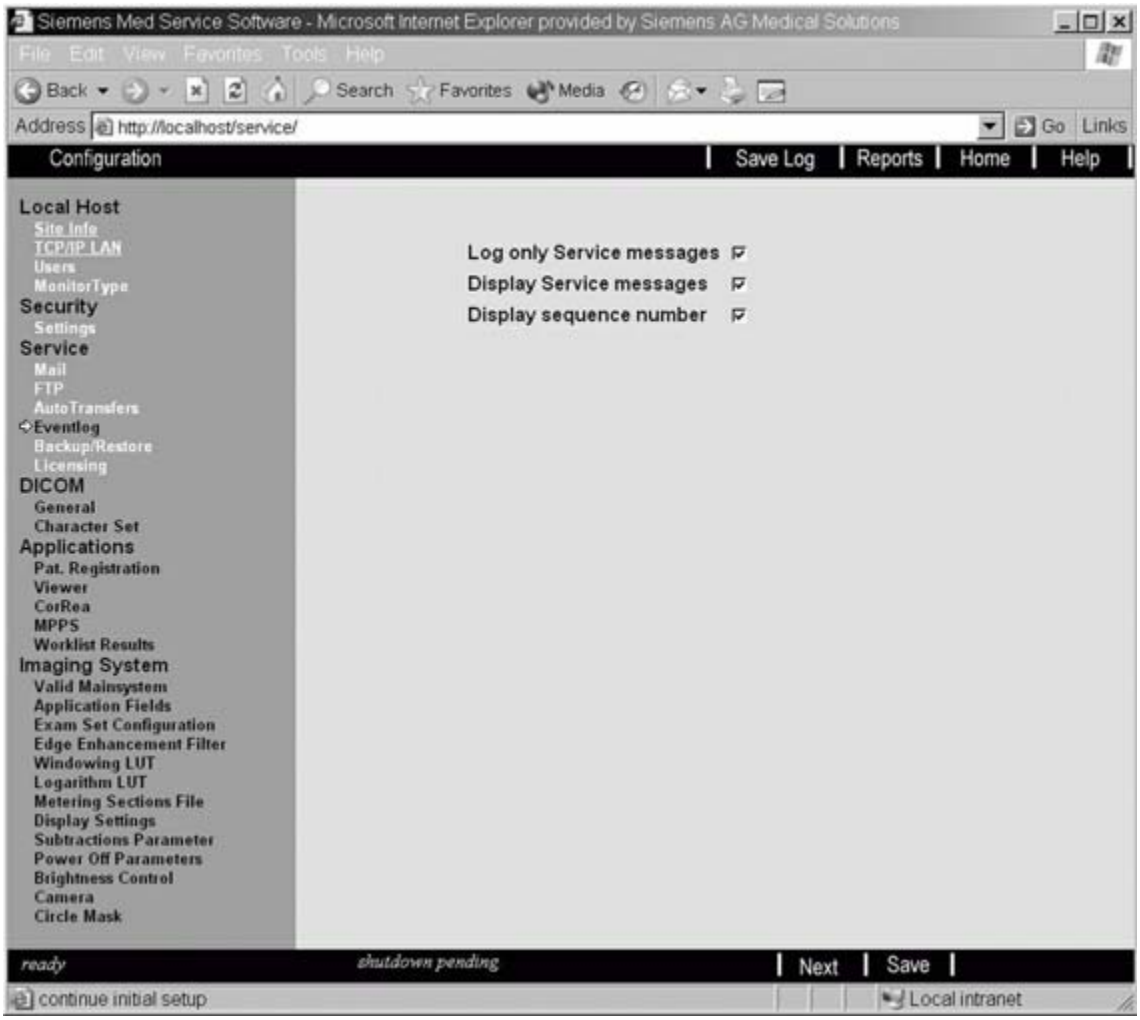


Fig. 16: Service >> Event log

Log only service messages

- Activated

Display service messages

- Activated

Select Display sequence number

- Activated

Backup/restore

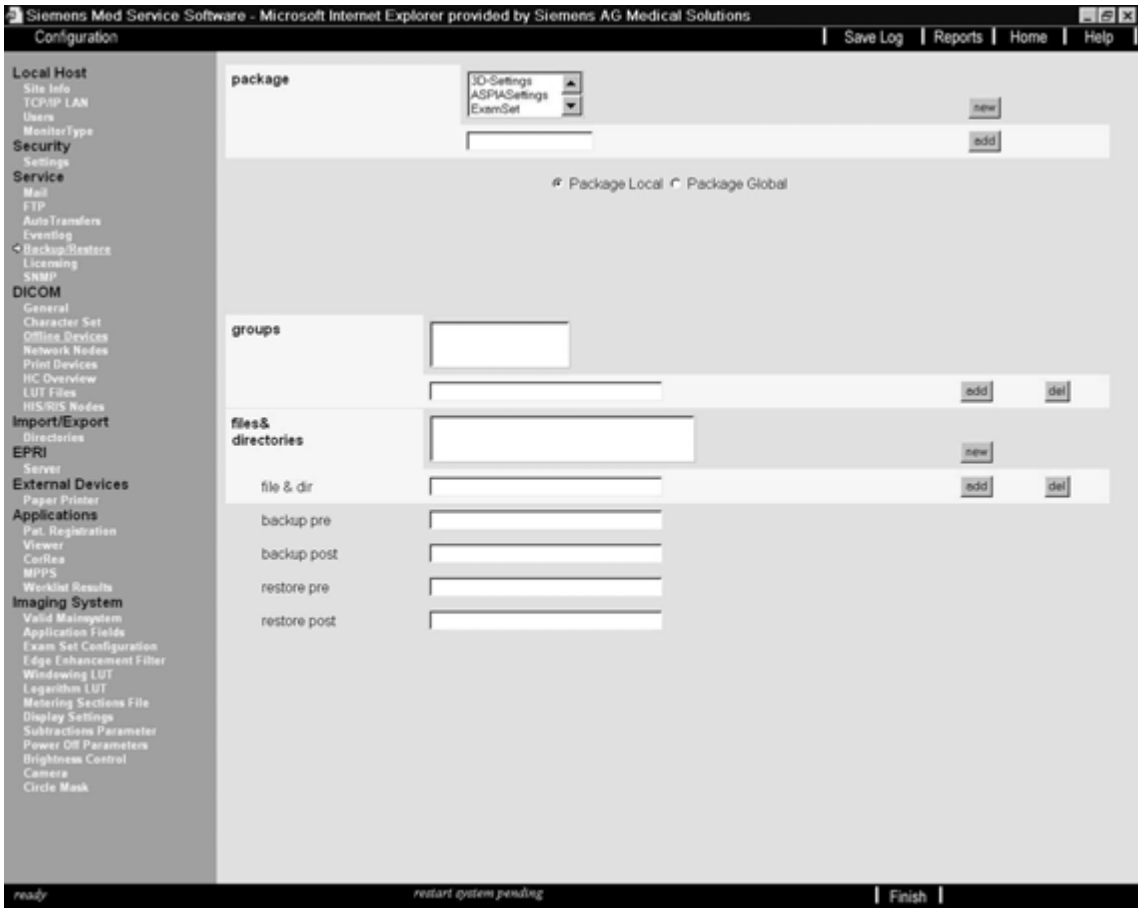


Fig. 17: Service >> Backup / Restore

- Do not make any entries.

Licensing

Several applications are protected with one license key. This licensing function allows you to display and modify an existing application license or to add a new application license to the system.

NOTE	**A license can be obtained from your UPTIME Service Center.**

Fig. 18: Service >> Licensing

- Licenses are copied using the Backup/Restore service function, or as follows:
  - Place the license CD in the drive.
  - Select the license via "Browse".
  - Select "Import license file".
  - Click <Save>.

DICOM

DICOM allows you to specify the parameters for the DICOM communication interfaces of your system and the remote systems.

AET = Application Entity Title

General

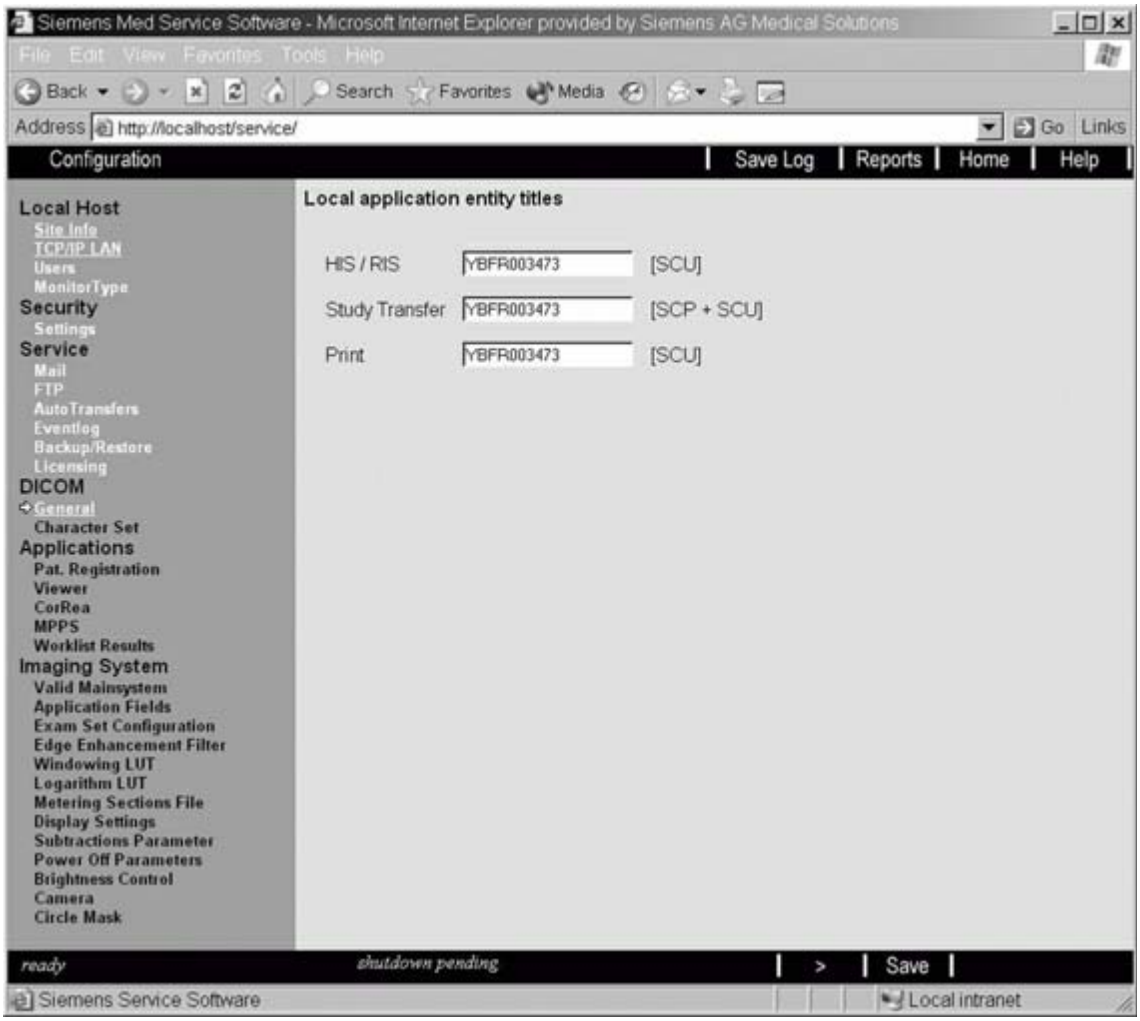


Fig. 19: DICOM >> General 1

Local application entity titles

HIS / RIS

- Enter AET for HIS/RIS.

Study transfer

- Enter AET for Study transfer.

Print

- Enter AET for Print.
- Click on ">".

General Dicom settings

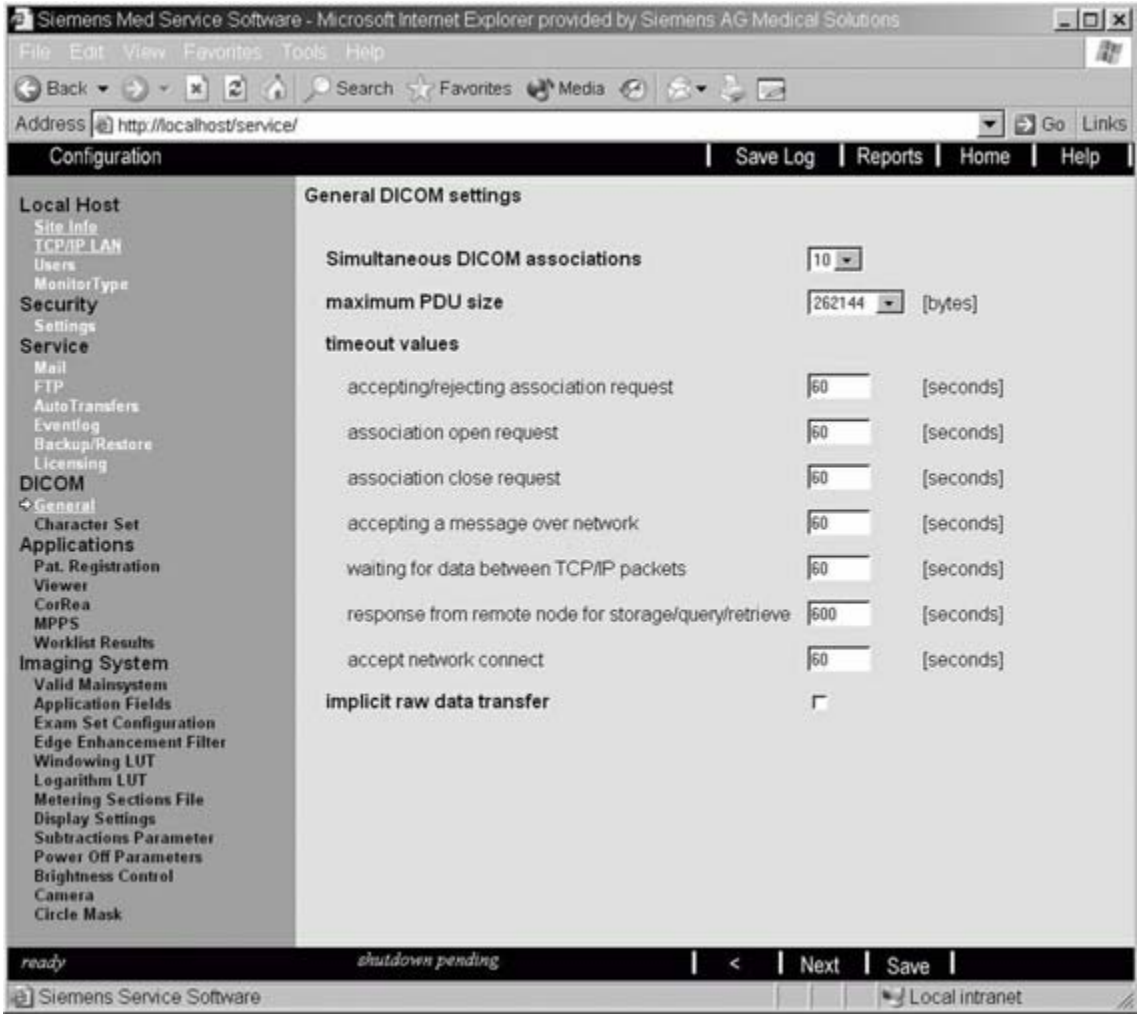


Fig. 20: DICOM >> General 2

- Do not make any changes on this page.

Character set

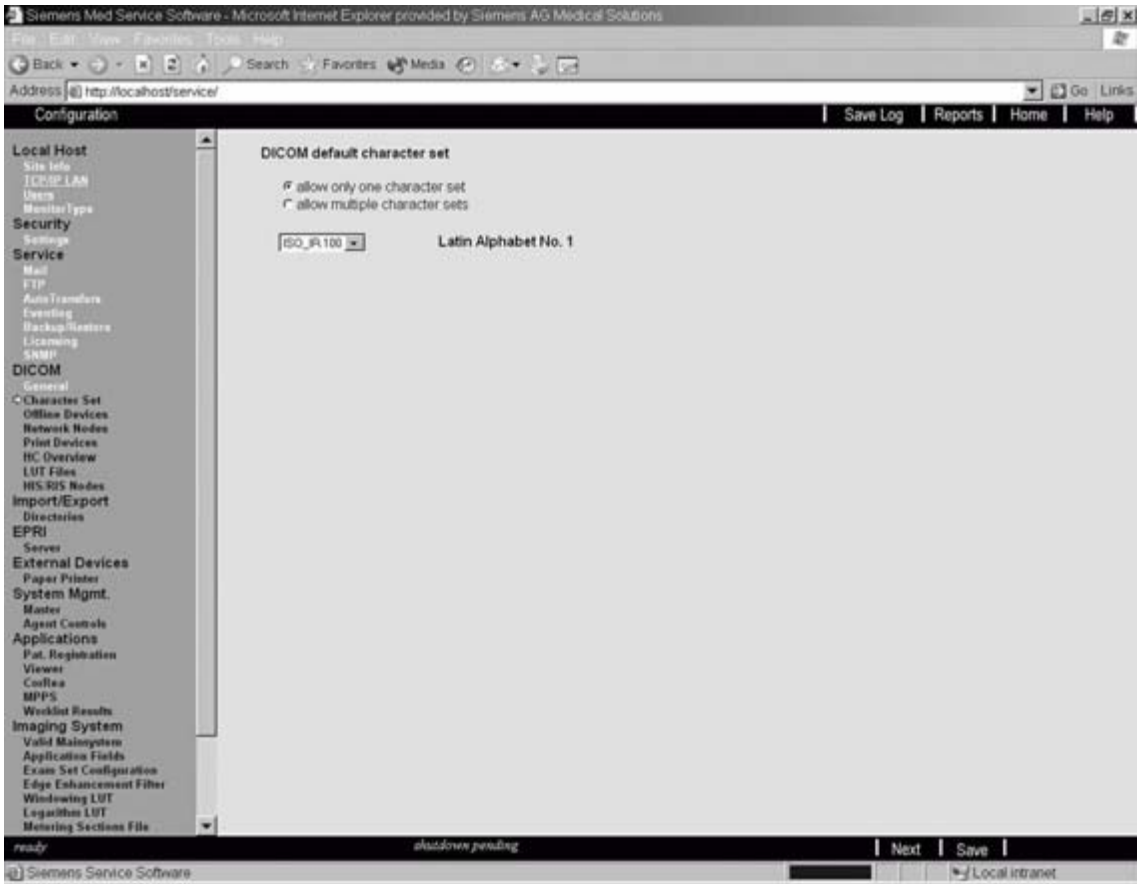


Fig. 21: DICOM >> Character Set 5

DICOM default character set

- Select "Allow only one character set".
- Select "ISO_IR 100":
  - The settings need to be changed only if the keyboard requires it.
    ISO IR 6 for USA (ASCII)
    ISO IR 13 for Japan

Offline devices

Using offline devices, you can make settings for DICOM offline devices (media storage) on the local host.

Fig. 22: DICOM >> Offline Devices

- Select "Define new" under "Select logical name".
- Select CD_RW under "Logical name".
- Do not select "Archive Device".

⚠WARNING

Risk of data loss.

CD-R media are not permitted for long-term archiving.

➪ **"Archive Device" must not be activated.**

Drive type

- Select "CD-RW drive".
- access = "Read/Write"
- “recording speed” = 8
- Do not select "CD-ROM drive", "Optical Disk Drive”, and "default”.
- Do not select "SPI file system”.

Drive letter

- Select "R:\".

SCSI settings

- Do not select anything under "Adapter”.
- Do not select anything under "Bus”.
- Do not select anything under "Target”.

Network nodes

The DICOM nodes for storage (send and receive) and query/retrieve are defined here. Please note that DICOM printers and the Radiology Information System (RIS) are not configured here.

The image transfer or query/retrieve targets entered can be selected in the viewer's or patient browser's menu "Transfer - Send to...".

The entered query/retrieve targets can be selected in the viewer's or patient browser's menu "Patient - Search".

NOTE

It is not possible to rename a DICOM node.

Work steps for creating a new DICOM node:

- **Delete old DICOM node.**
- **Perform a system restart via <Options>-<End Session>.**
- **Enter the new DICOM node and restart the system again.**

NOTE

If this system has 3D Navigation, a DICOM node must be configured as described in the "3D Navigation" section.

Fig. 23: DICOM >> Network Nodes 1

Network nodes not available:

- Select ">".

Network nodes available:

NOTE	**DICOM license required.**

- Under "Select Host", select "Define new".

Host name

- Enter Host name.

TCP/IP address

- Enter the IP address.

Connected by

- Select "LAN".
- Select ">".

General node properties

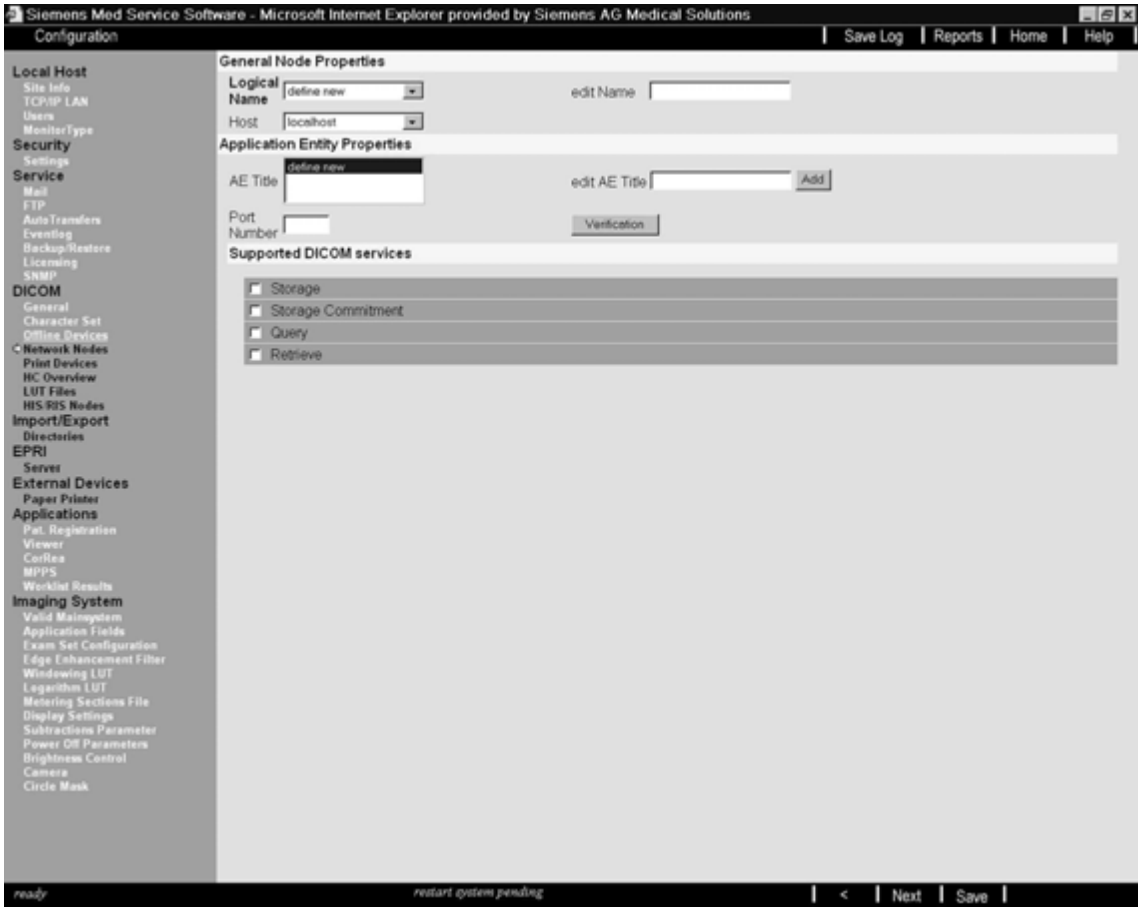


Fig. 24: DICOM >> Network Nodes 2

Logical name

- Select "Define new".

Editing the name

- Enter the name under "Edit name".

Host

- Under "Host", select the host name entered on the previous page.

Application entity properties

AE title

- Select "Define new".
  - ➪ The already configured AETs are shown in the pull-down menu.

Editing the AE title

- Enter a name in the "Edit AE title" field.

Port number

- Enter the port number for the DICOM device.
- Click "Add".
- Do **not** select Verification.

Supported DICOM services

Select the DICOM services that the customer has purchased and which are to be performed by the corresponding system.

NOTE	**At least “Storage” must be selected.**

Storage

- Select "Storage".
- Select "Retrieve" if the particular DICOM device is to support query.
- Click "Save".
- Do not make any changes under "Storage".

Storage commitment

- Select "Storage Commitment" if the particular DICOM device is to be configured as the Storage Commitment provider.

Query

- Select "Query" if the particular DICOM unit is to support query.
- Select "Patient root" under "Provides DICOM query model".

Retrieve

- Select "Retrieve" if the particular DICOM device is to support retrieve.
- Click <Save>.

Print devices

Select DICOM laser cameras connected to your system via DICOM Basic Print. A local printer is NOT a DICOM printer!

This system does not support the SPCI/SPDI camera interface.

NOTICE

If a printer needs to be deleted, e.g., following an incorrect entry, the correct sequence of print devices 3 to print devices 1 must be observed.

➪ **Otherwise, problems can occur, e.g. in the “Filming” application card, in the user interface or when making registration settings.**

NOTE

You will find the installation instructions for each released camera on CB-DOC under Installation, in the "Camera” catalog.

NOTE

Configuring "Print Devices" without the necessary DICOM license will result in an error.

Print devices 1

Fig. 25: DICOM >> Print Devices 1

Host properties

Select Host

- Under "Select Host", select "Define new".

Host name

- Enter host name of the DICOM camera.

TCP/IP address

- Enter the IP address.

Connected by

- Select "LAN".
- Under "Select Host", select the host name entered for the DICOM camera.
- Click on ">".

Print devices 2

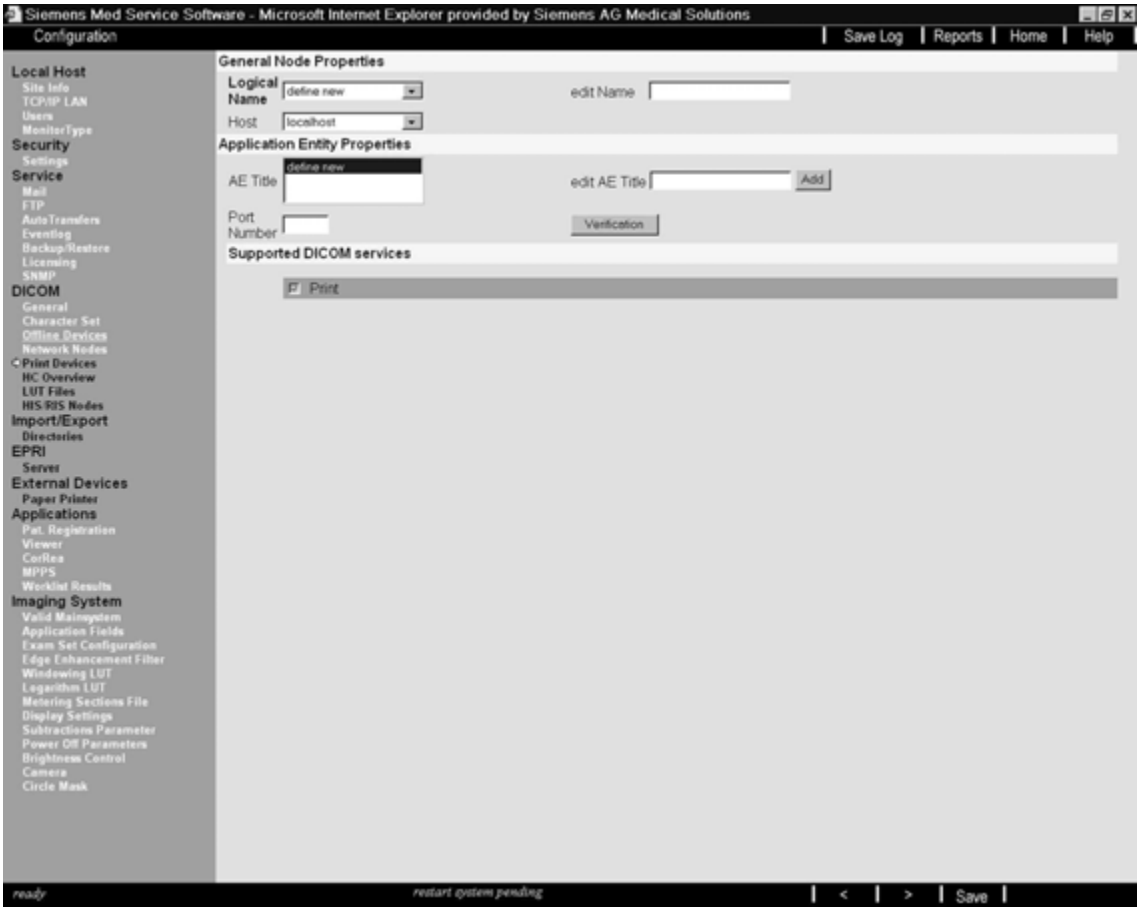


Fig. 26: DICOM >> Print Devices 2

General node properties

Logical name

- Select "Define new".

Editing the name

- Enter the name under "Edit name".

Host

- Under "Host", select the name entered on the previous page.

Application entity properties

AE title

- Select "Define new".
  - ➪ The AETs that have already been configured are shown in the pull-down menu.

Editing the AE title

- Enter a name in the "Edit AE title" field.

Port number

- Enter the port number for the DICOM device.
- Do **not** select Verification.
- Click "Add".

Supported DICOM services

Print

- "Print" is permanently selected.
- Select ">".

Print devices 3

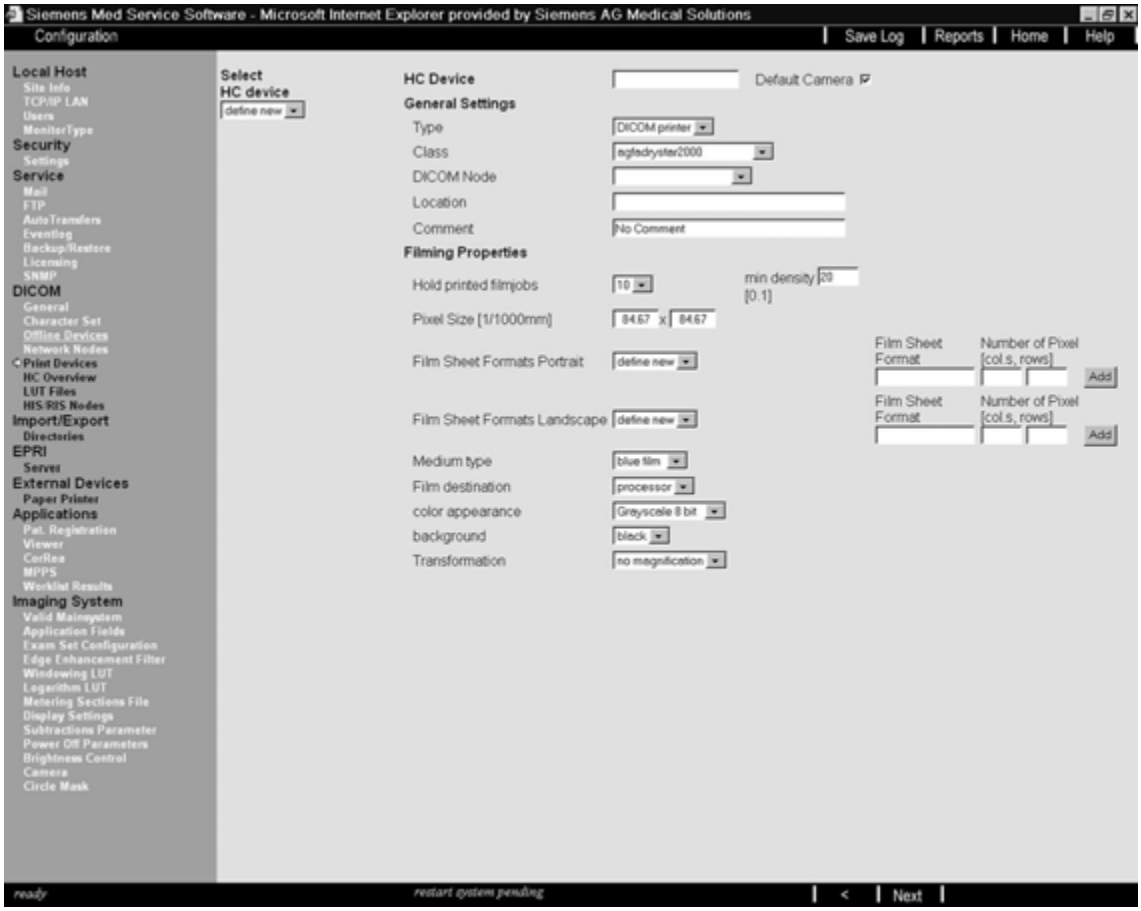


Fig. 27: DICOM >> Print Devices 3

Selecting the HC device

- Select "Define new" under "Select HC device".

HC device

- Enter the name of the camera.
  - ➪ This name will be displayed in the customer interface in the "Print" tab card.

Default camera

- Select this option to specify the camera as the default camera.

The other cameras need to be selected via a pull-down menu in the print tab card at the customer user interface.

General settings

Type

- Select "DICOM printer".

Class

- Select the DICOM camera in the pull-down menu, and make no other changes on this page.

  If your camera is not yet released or not in the list, contact the responsible Headquarter Support Center.

HC overview

NOTE	**This menu has no meaning for the service engineer, since the settings and tests can also be performed in the “Print device” menu.**

The "Hard copy overview" menu is intended to provide the customer with a menu to manipulate and test certain camera settings.

- Select "HC overview".

Fig. 28: DICOM >> HC Overview

- Do not make any changes under "HC overview".

LUT files

LUT files (lookup table) for DICOM Basic Print can be imported, deleted, or selected in this menu.

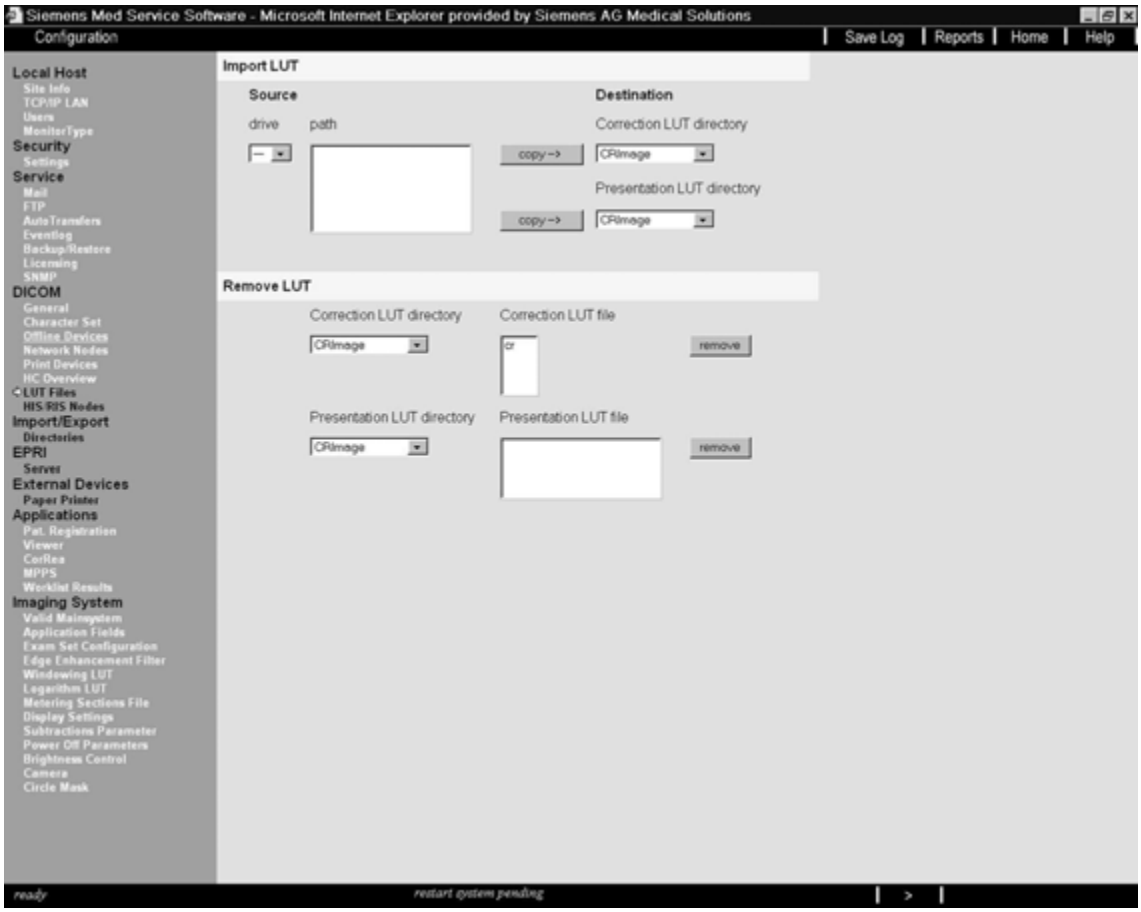


Fig. 29: LUT Files 1

- Do not make any changes.

NOTE	**The LUTs are automatically installed along with the software.**

- Click on ">".

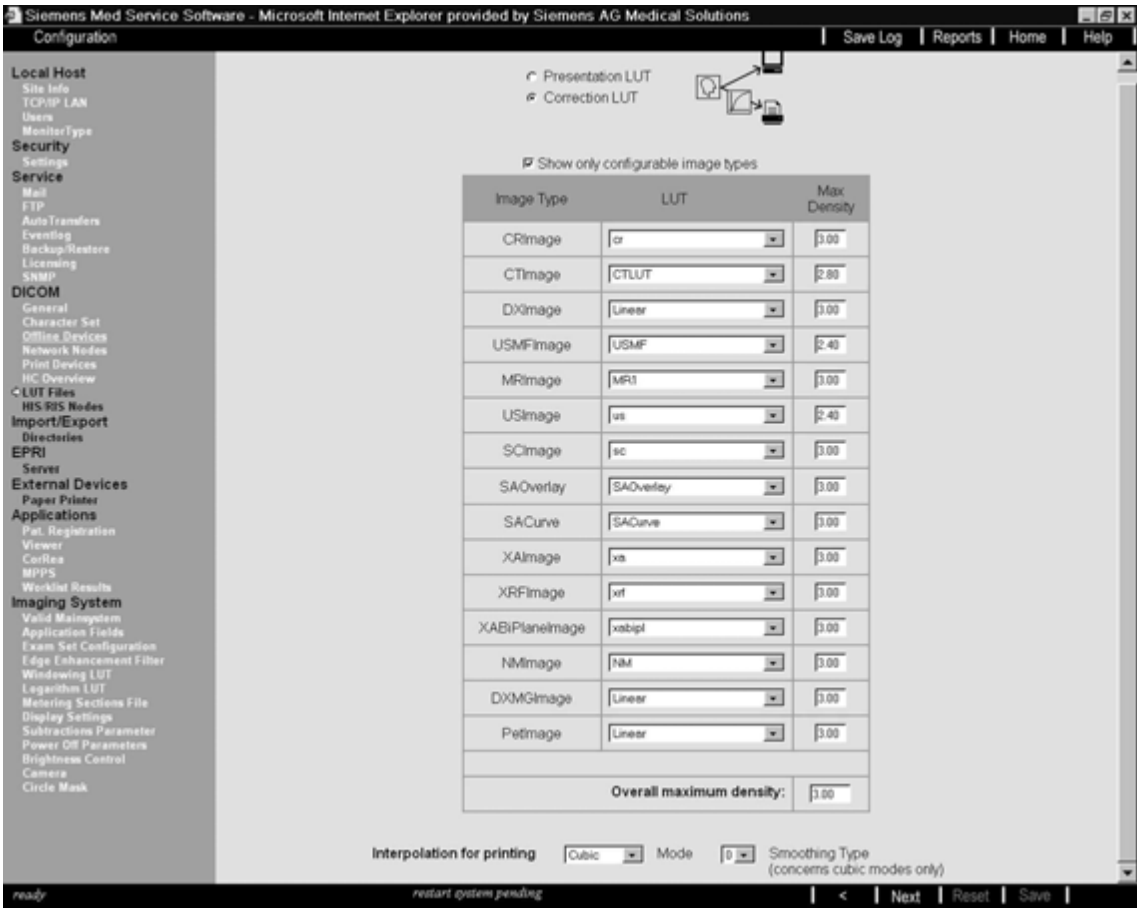


Fig. 30: LUT Files 2

- Do not make any changes since all values will be entered automatically during the software installation.

Max. density

- Do not make any changes!

Overall maximum density

- Default = 3.00

Interpolation for printing

- Default = “Cubic”

Mode

- Default = “0”

HIS/RIS nodes

NOTE	DICOM "Worklist" license required.

Configuration of a Hospital Information System (HIS) or Radiology Information System (RIS) that supports DICOM Basic Worklist or the Detached Study Transfer Service. In many cases, the RIS will be connected via an interface box such as the Mitra Broker (MagicLink HL7).

HIS/RIS nodes 1

Fig. 31: HIS / RIS Nodes 1

Host properties

- Under "Select Host", select "Define new".

Host name

- Enter the HIS / RIS node host name.

TCP/IP address

- Enter the IP address.

Connected by

- Select "LAN".
- Under "Select Host", select the Host name entered for HIS/RIS.
- Click on ">".

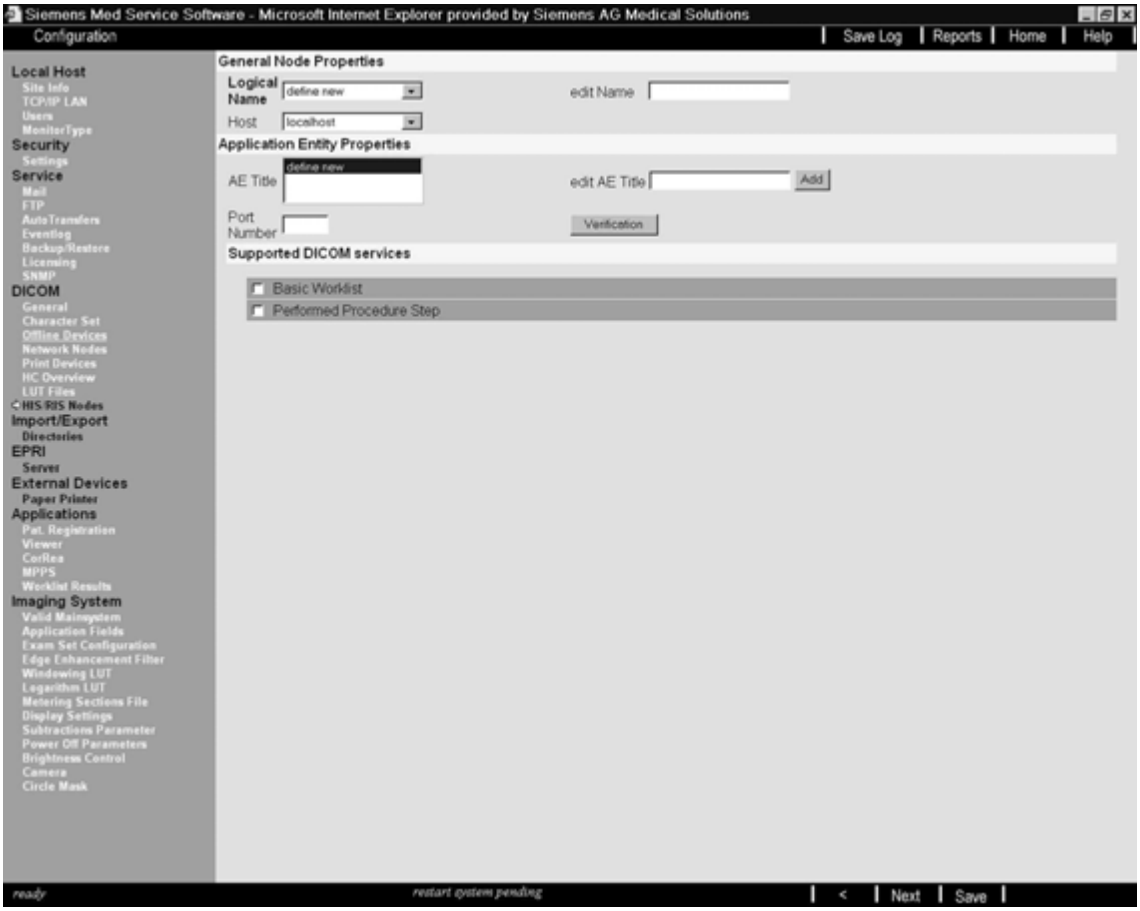


Fig. 32: HIS / RIS Nodes 2

General node properties

Host

- Under "Host", select the name entered on the previous page.

Logical name

- Select "Define new".
  - ➪ The DICOM worklist request will run in the background, and only one HIS/RIS can be selected. As a result, the logical name is not displayed in the customer user interface.

Editing the name

- Enter the name under "Edit name".
  - ➪ The name can be selected freely.

Application entity properties

AE title

- Select "Define new".
  - ➪ The already configured AETs are shown in the pull-down menu.

Editing the AE title

- Enter a name in the "Edit AE title" field.

Port number

- Enter the port number for the DICOM device.
- Do **not** select Verification.
- Click "Add".

Supported DICOM services

Basic worklist

NOTE	**At minimum, "Basic worklist" has to be selected.**

- Select "Basic Worklist".

Query waiting time

- Check whether 20 sec. is listed; if not, enter it.

Max. query match number

- Check whether 200 matches is listed; if not, enter it.

Query interval

- Check whether 60 minutes is listed; if not, enter it.

NOTE	**To activate the automatic DICOM worklist polling function, it is also necessary to select "HIS/RIS update worklist in background" option in the customer user interface under "Option - Configuration - Patient Registration".**

Default basic worklist node

- Select "Default Basic Worklist node".

Performed procedure step

NOTE **This item is to be edited only if an MPPS license is available and MPPS is used.**

At the beginning and following patient acquisition, the DICOM Service Modality Performed Procedure Step (MPPS) sends data to the information system (e.g., RIS). Select this option if the selected information system is the destination to be used for this DICOM service.

Default catalog name

- If codes are used, enter the name of the coding catalog used in the information system.

  ➪ MPPS uses codes instead of readable values.

Default catalog version

- If codes are used, enter the version of the coding catalog used in the information system.

Default PPS node

- Select "Default PPS node".
- Click <Save>.

Import/export

The system provides the function to import or export DICOM images from/to the file system. In this section, you need to specify the location of the import/export directories. They will be located on the local system or in a shared directory.

For shared directories, you first need to configure the host on which the shared directory is located.

To import/export DICOM images you need to select "Transfer - import from offline" or "Import/export to offline" at the customer user interface.

Directories

Fig. 33: Import / Export >> Directories 1

Host properties

- Under "Select Host", select "Define new".

Host name

- Under "Host Name" enter the computer name of the system.

TCP/IP address

- Enter the IP address.

Connected by

- Select "LAN".
- Select the host name entered under Select Host.
- Click on ">".

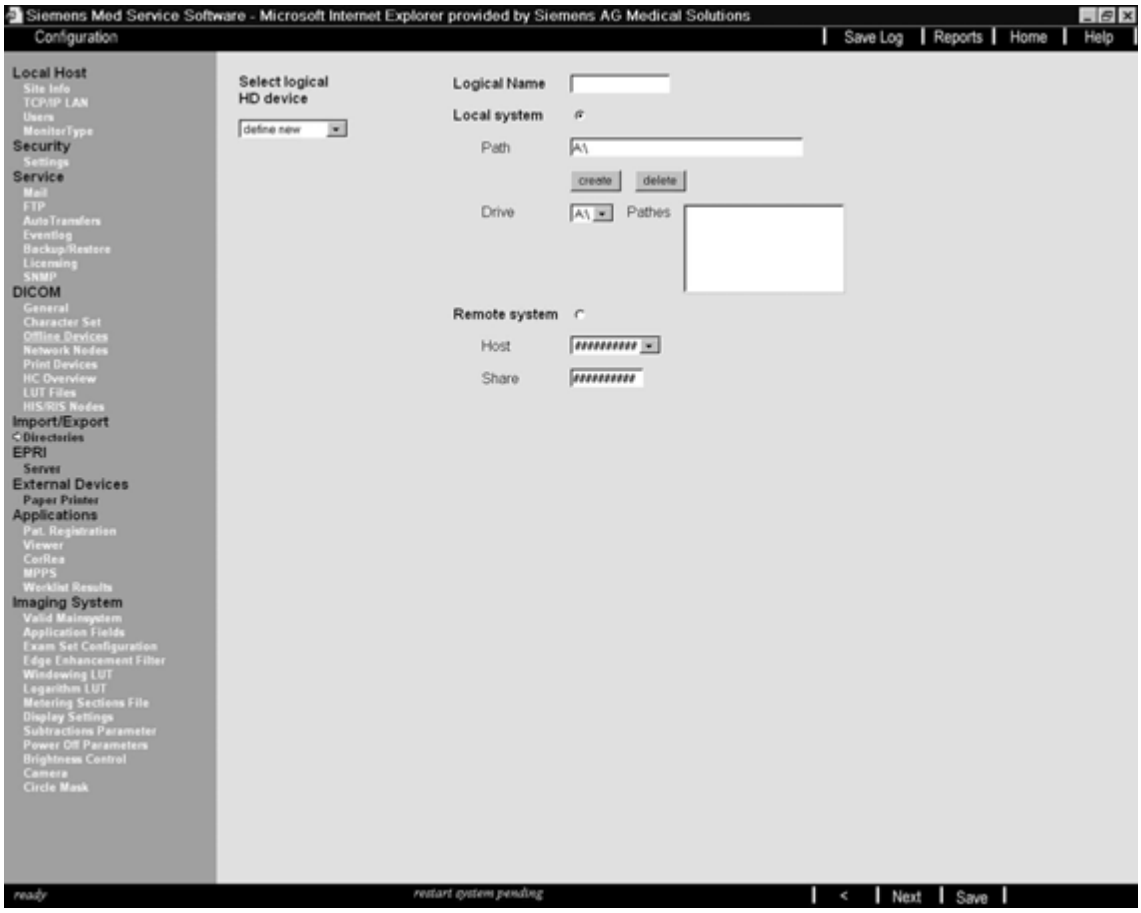


Fig. 34: Import / Export >> Directories 2

Select logical HC device

- Select "Define new".

Logical name

- Enter "DICOM Tools" under "Logical name".

  The logical name will be displayed in the customer user interface under "Transfer - Off-line - Export / Import".

Local system

- Select "Local system".
- Under Path enter "C:\Syngo\Service\dst\img".

- Under drive, select the drive name C:\
- Select "Create".
- Click <Save>.

Remote system

- Do not select "Remote system”.

Host

- Do not make any entries.

Share

- Do not make any entries.

EPRI

The EPRI (Electronic Patient Record Interface) is a web interface (Internet Explorer browser) to a server which provides additional data about the selected patient.

Server

The customer user interface provides a button to open a web browser with a link to an EPR server. The URL and the type of EPR server need to be specified in this menu.

Fig. 35: EPRI >> Server

EPR interface

Location of EPR server

- Do not make any changes under "Location of EPR server".

Type of EPR server

- Do not make any changes under "Type of EPR server".

External devices

Paper printer

NOTE	The local printer has to be installed according to the software installation manual.

NOTE	Even locally networked screen printers are labeled as paper printers in Syngo.

Fig. 36: Configuration >> ExternalDevices >> PaperPrinter

Available paper printer media formats

- Select "A4" and "8x10" and deselect all other formats.

Printer settings

NOTE	Under printer settings, the background can be selected outside the image circle. “Black”= “Default”

- Select "Black".

PS LUT files

Fig. 37: Configuration >> ExternalDevices >> PSLUTFiles

- "Use LUT for Postscript printers" = ☑
- "Use floating Zoom factors" = ☑
- For Codonics and Sony UPD 72: Select the "PrinterLUT_Gamma_1_6" characteristic curve under "PS LUT directory".
- For Sony UPD 970 and UPD 990 : Do not select an LUT under "PS LUT directory".
  - ➪ The "PS LUT directory" field should remain blank.
- Click "Select" and "Save".

Applications

Menus for setting application parameters are available under "Applications".

NOTE	**As a rule, changes are made by application specialists and not CSEs.**

Pat. registration

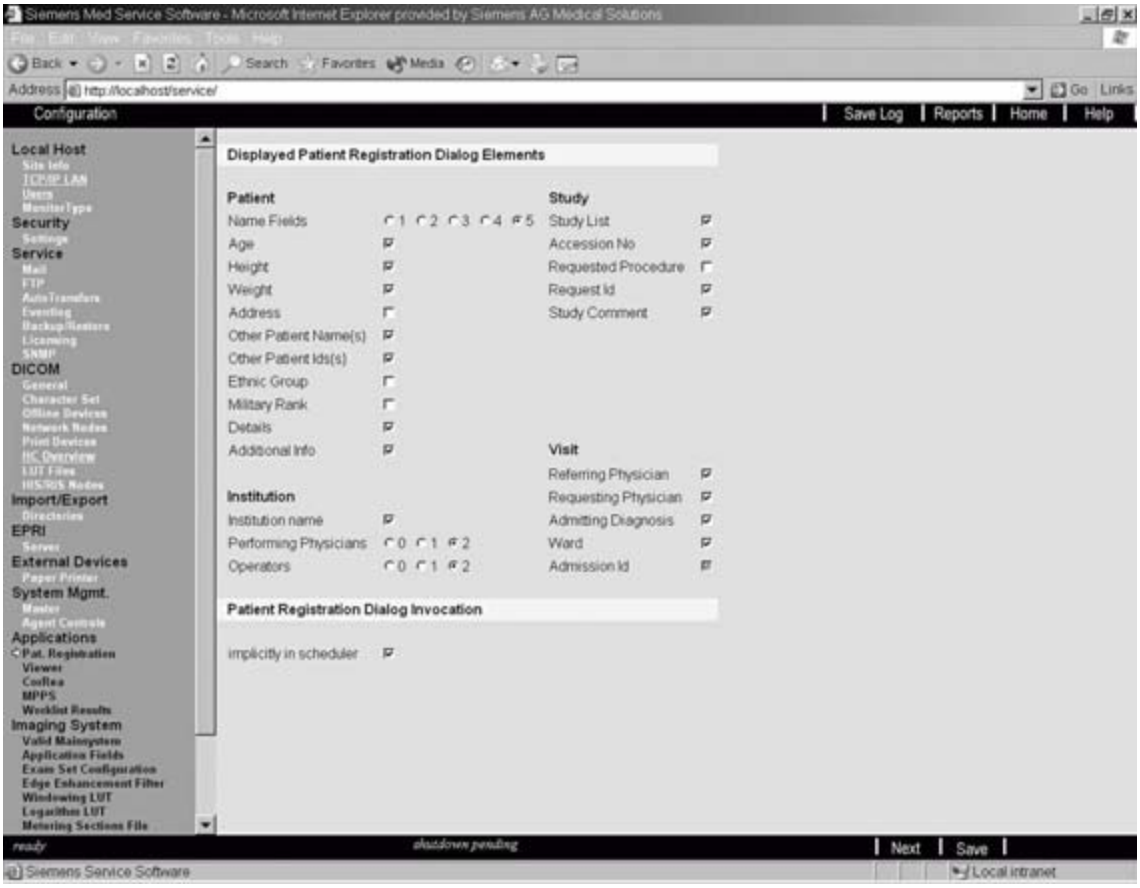


Fig. 38: Applications >> Pat. Registration 5

Patient

- Do not make any changes.

Institution

- Do not make any changes.

Invoking the patient registration dialog

- Do not make any changes.

Study

- Do not make any changes.

Visit

- Do not make any changes.

Viewer

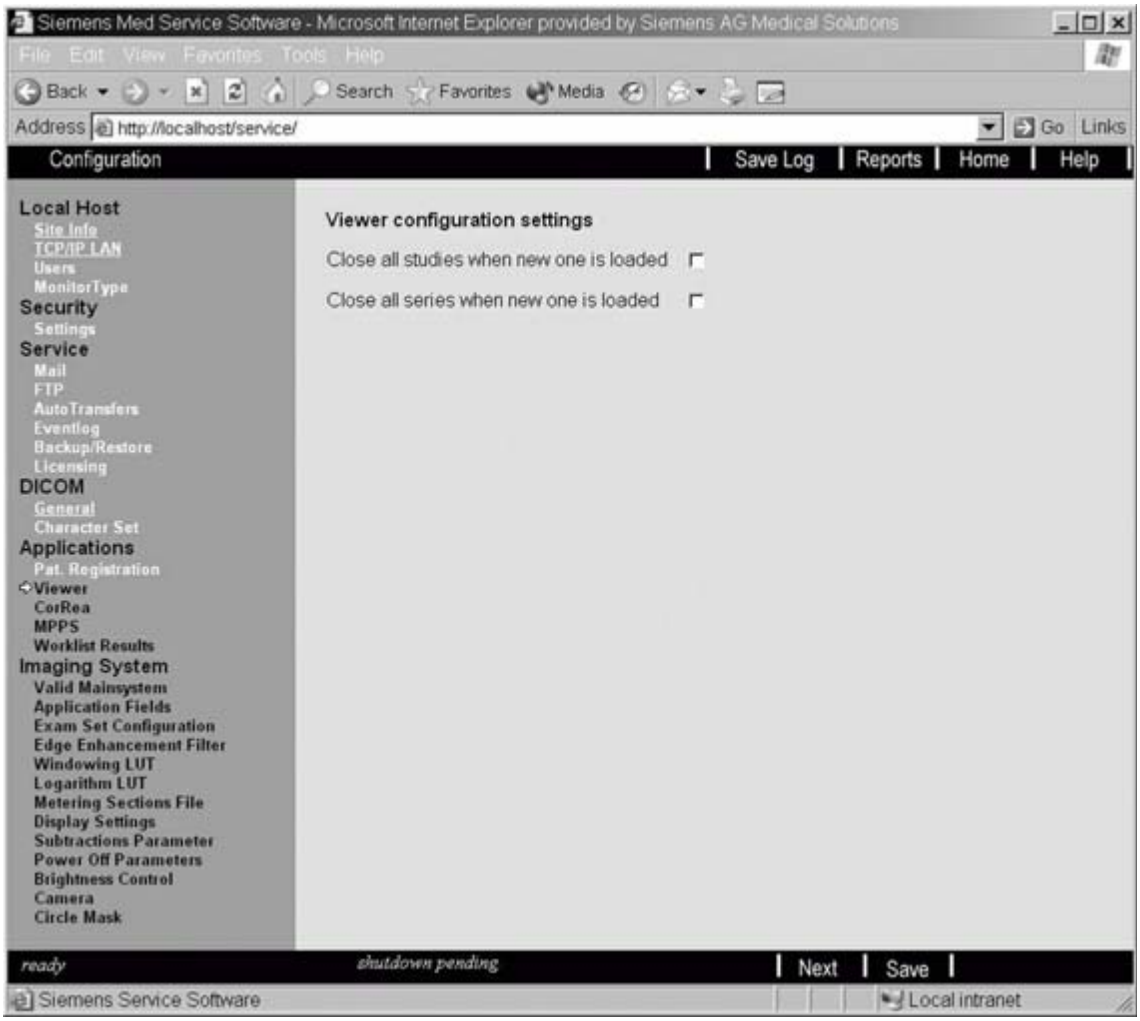


Fig. 39: Applications Viewer

Viewer configuration settings

Close all studies when a new one is loaded

- Do not select.

Close all series when a new one is loaded

- Do not select.

CorRea

In this menu, you can set the attributes that can be modified in the CorRea(=Correct & Rearrange Platform).

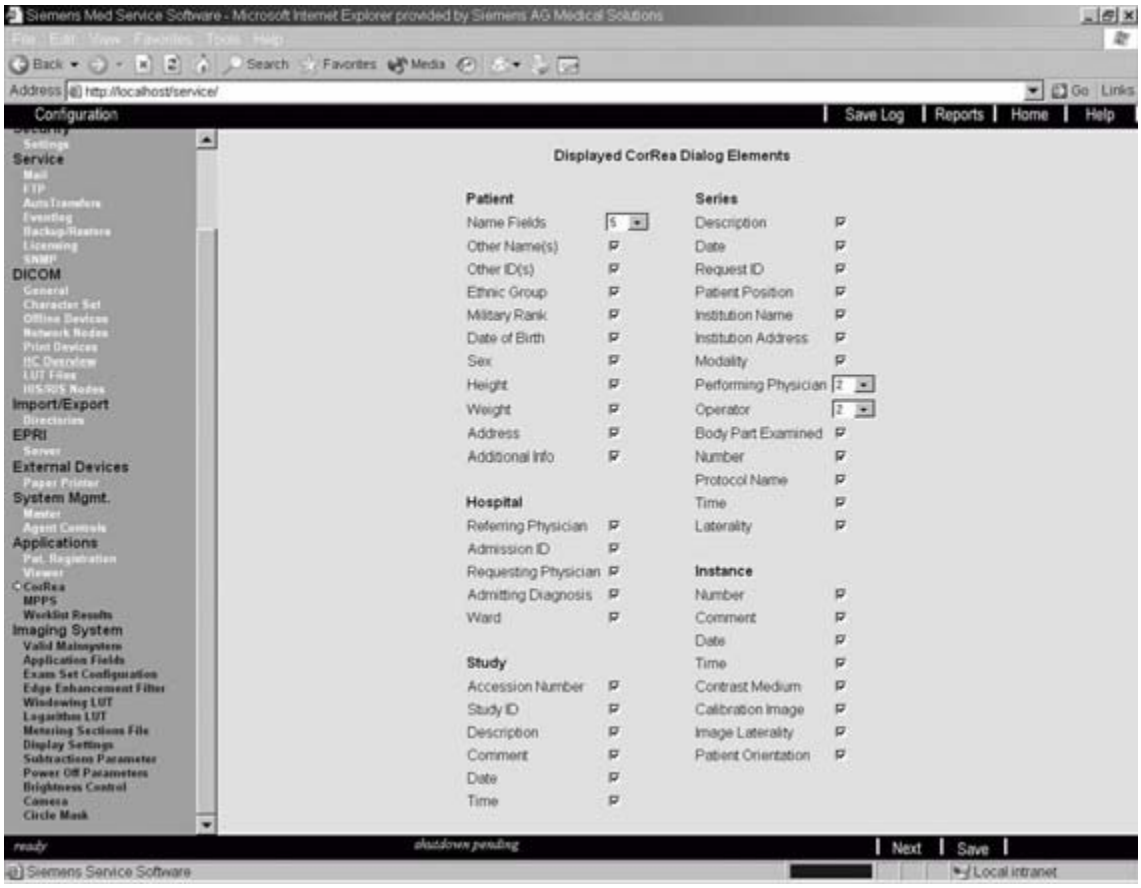


Fig. 40: Applications >> CorRea 5

Displayed CorRea dialog elements

Patient

- Do not make any changes.

Hospital

- Do not make any changes.

Study

- Do not make any changes.

Instance

- Do not make any changes.

Series

- Do not make any changes.

MPPS

(Modality Performed Procedure Steps)

NOTE

Required settings that go beyond this syngo configuration can be performed only in cooperation with the responsible hospital network administrator.

The attributes to be displayed in the customer user interface when a MPPS message is sent to the RIS will be set in this menu.

Fig. 41: MPPS Applications

Displayed MPPS dialog elements

- Do not make any changes.

Worklist results

The attributes displayed after a DICOM worklist request in the patient registration form will be set in this menu.

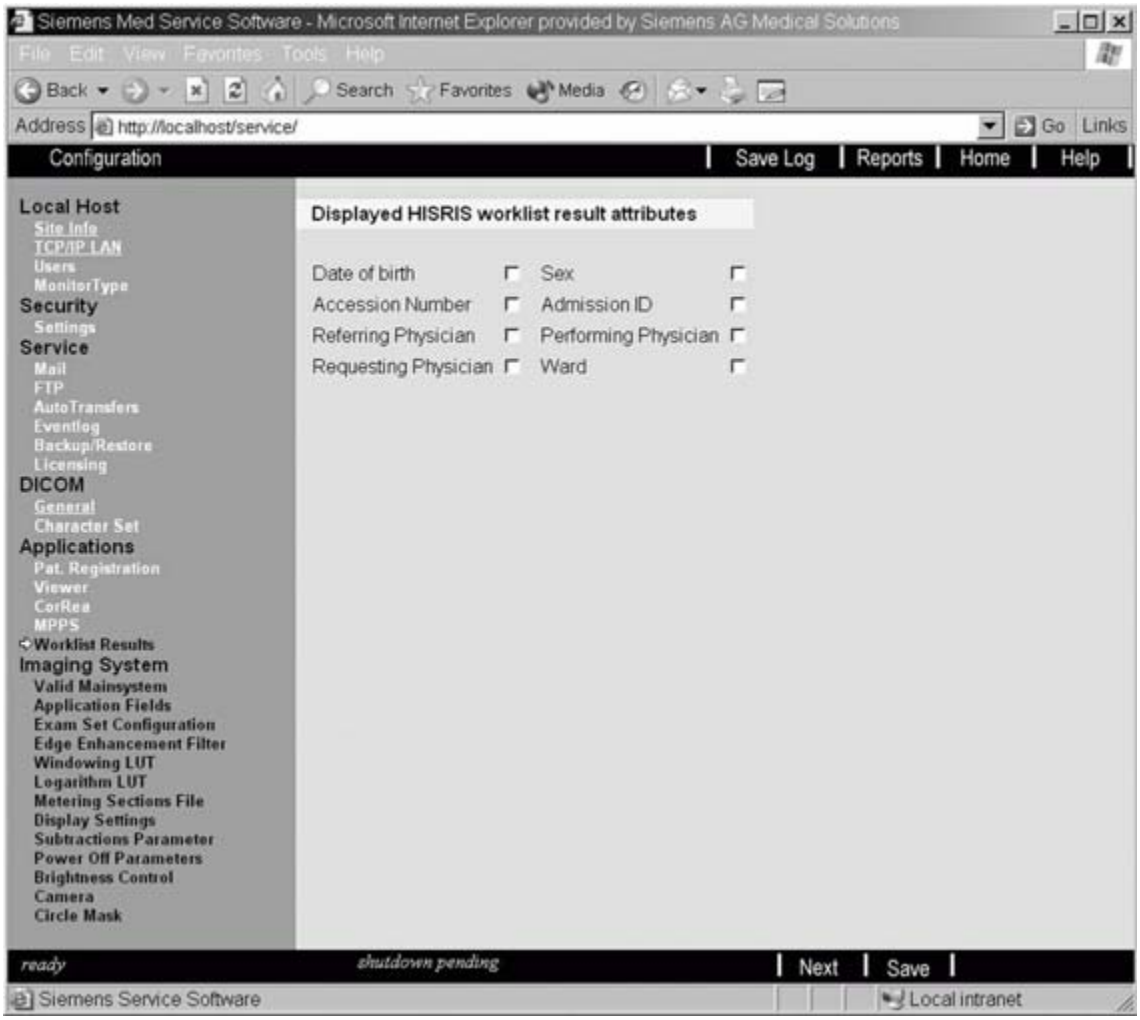


Fig. 42: Applications Worklist Results

Displayed HISRIS worklist result attributes

- Do not make any changes.

Help/documentation

Help update

The "Quick Reference Guide," if available, can be loaded under this menu item.

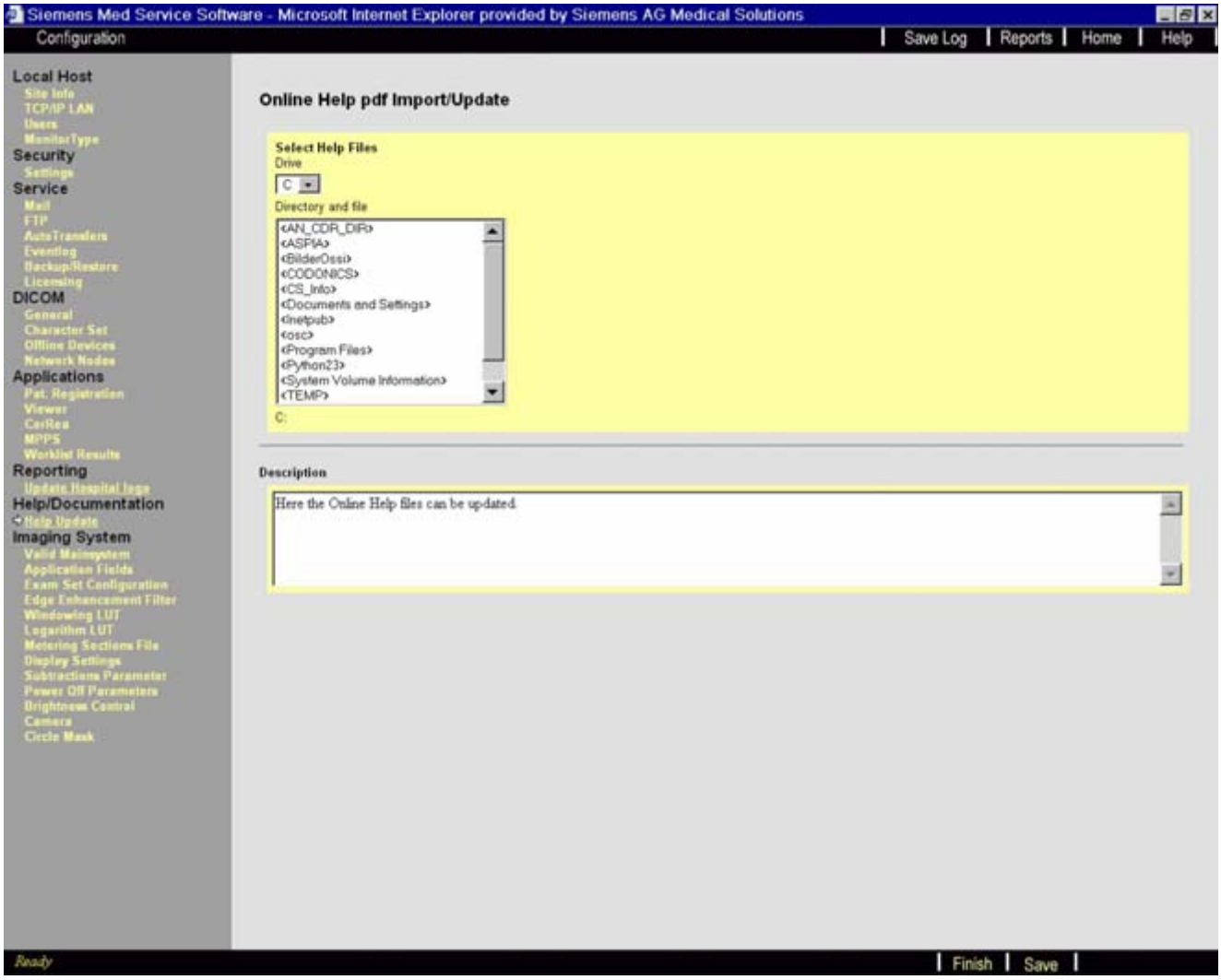


Fig. 43: Configuration help documentation import update

Reference guide

- Place the "Quick Reference Guide" CD in the CD drive.
- Select drive "R" under "Drive".
- Select the path under "Directory and file".

Imaging system

NOTE	**The Examination Set Editor may not be opened.**

Valid main system

- During the initial installation: Enter the "Serial Number" of the main system and click <Save>.

Application fields

NOTE	**For application fields that require a license, you must first load the license. Then you will be able to activate this application field as described below.**

- Select "Application fields".
- To activate an application field, it must be selected under "Application fields" and then activated by pressing the "Activate" button.
  - To select an application field as the default application field, it must be displayed under "Activated application fields".
    ➪ There are application fields that require a license, e.g., Vascular (DSA).

Examination set configuration

The minimum and maximum filters and LUTs for each examination set can be defined here to the customer's request.

- "Maximal number of Edge Enhancement Filters per Examination Set": 4
- "Maximal number of LUTs per Examination Set": 4
- Select "Keep first Examination Set in List of Active Examination sets". Configure according to the specific country. Deselected = Standard (except Austria).
  ➪ By selecting "Keep first Examination Set in List of Active Examination sets", the first examination set in the active examination set list becomes the default.

Edge enhancement filters

NOTE	**During initial installation, click <Default> and <Save>.**

Importing edge enhancement filters

NOTE	**Change only with instructions from the factory!**

The edge enhancement filters are responsible for edge enhancement.

If an edge enhancement filter is imported, proceed as follows:

- Select the required drive under "Drive".
- Select the required file in "Directory and file".
- Click "Import".
  - ➪ The file will be displayed under "Available files".

Windowing LUT

If a windowing LUT is imported, proceed as follows:

NOTE	**Change only with instructions from the factory!**

- Select the required drive under "Drive".
- Select the required file in "Directory and file".
- Click "Import".
  - ➪ The file will be displayed under "Available files".

Logarithm LUT

If a logarithm LUT is imported, proceed as follows:

NOTE	**Change only with instructions from the factory!**

- Select the required drive under "Drive".
- Select the required file in "Directory and file".
- Click "Import".
  - ➪ The file will be displayed under "Available files".

If a logarithm LUT is activated, proceed as follows:

- Select the required file under "Available files".
- Click on "Activate".
  - ➪ The file will be displayed under “Activated logarithm LUT file".

If a logarithm LUT is to be removed, proceed as follows:

- Select the required file under "Available files".

- Click on "Remove".
  ➪ The file will be removed under "Activated logarithm LUT file".

NOTE	**A file must always be entered under “Activated logarithm LUT file“.**

Metering section file

NOTE	**During initial installation, click <Default> and <Save>.**

To import a metering section file, proceed as follows:

NOTE	**Change only with instructions from the factory!**

Select the required drive under "Drive".

- Select the required file in "Directory and file".
- Click "Import".
  ➪ The file will be displayed under "Available files".

For activating a metering section file, proceed as follows:

NOTE	**Change only with instructions from the factory!**

- Select the required file under "Available files".
- Click on "Activate".
  ➪ The file will be displayed under “Activated metering section file".

If a metering section file is to be removed, proceed as follows:

NOTE	**Change only with instructions from the factory!**

- Select the required file under "Available files".
- Click on "Remove".
  ➪ The file will be removed under “Activated metering section file".

NOTE	**A file must always be entered under “Activated metering section file “.**

Display settings

Collimator (display for graphical collimator fade out)

- Collimator Fade out Delay: "3" (Default)

DAP / Air Kerma

NOTE	**A DAP chamber with a resolution of 0.01 cGy cm*cm/Pulse is the prerequisite for the "Air Kerma" monitor display.**

NOTE	**If an air kerma is configured, an adjustment must be made under <Service>-<Main System>-<Adjustment>-<DAP Air Kerma>.**

- “Dose Area Product” or “Air Kerma” can be selected (as required by the customer).
  - “Dose Area Product” = Default

Subtraction parameters

NOTE	**During initial installation, click <Default> and <Save>.**

The minimum and maximum values for noise suppression for the individual phases are set here.

Operating mode (SUB)

Noise reduction factor

- “Phase A”: GGM 32
- “Phase A Low”: GGM 32
- “Phase B” : GGM 8
- “Phase B Low”: GGM 4

Duration

- “Phase A”: 75 “frames”
- Click ">".

Operating mode roadmap

Noise reduction factor

- “Phase A”: GGM 32
- “Phase A Low “ GGM 32
- “Phase B” : GGM 8
- “Phase B Low”: GGM 4

- “Phase C“: GGM 4
- “Phase C Low “: GGM 2

Duration

- “Phase A”: 75 “frames”

Motion detection

NOTE	**During initial installation, click <Default> and <Save>.**

Here the parameters MD1, MD2 and MD3 are set for automatic motion detection.

MD1

- “LowPass Kernel”: 1
- “Counter”: 2
- “Noise Reduction Value”: 40
- “Sigma”: 10
- “Kmul”: 2
- “Alpha-Gain”: 1.115
- “Prior”: 0.02
- Select ">".

MD2

- “LowPass Kernel”: 1
- “Counter”: 2
- “Noise Reduction Value”: 52
- “Sigma”: 10
- “Kmul”: 2
- “Alpha-Gain”: 1.115
- “Prior”: 0.02
- Select ">".

MD3

- “LowPass Kernel”: 1
- “Counter”: 2
- “Noise Reduction Value”: 68
- “Sigma”: 10
- “Kmul”: 2
- “Alpha-Gain”: 1.115
- “Prior”: 0.02

Power off parameters

NOTE	**If the Grace Period parameter is less than 800 (= 8 seconds), proper system startup is not guaranteed.** **Leave the Grace Period parameter at "800".**

NOTE	**During initial installation, click <Default> and <Save>.**

The time period during which the main system can be switched on again without also switching on the image system is defined under "Power off grace period".

- “Power Off Enable”: ☑
- Power Off Grace Period: “800” (x 10ms = 8 seconds)

Brightness control

NOTE	**During initial installation, click <Default> and <Save>.**

Autogamma

- Do not select "Autogamma disabled".

Brightness control

- “Nominal Brightness value (Arithmetic Mean, Mainsystem)”: 1000
- “Brightness Value Limitation Min”: 940
- “Brightness Value Limitation Max”: 1060
- “Nominal Brightness Value (Median, Autogamma)”: 1550

NOTE	**Brightness Control (metal button) applies to ARCADIS Avantic only).**

Brightness Control (Metal Button)

- “Nominal Brightness value (Arithmetic Mean, Mainsystem)”: 430
- “Brightness Value Limitation Min”: 404
- “Brightness Value Limitation Max”: 456
- “Nominal Brightness Value (Median, Autogamma)”: 753
- Click on ">".

Auto Gamma Configuration

- “AGA Lambda”: 800
- “AGA Gamma Min”: 20
- “Gamma LUT Source”: Brightness Control Unit

- “Gamma LUT Index”: 50

Camera

NOTE	**During initial installation, click <Default> and <Save>.**

The parameters required for the individual operating modes are set here.

- "DR single": 2 = Varic/Orbic / 1 = Avantic
- "DR single sum": 2
- "CFC": 2
- "PFC IDL": 2
- "PFC PDL": 2
- “DCM”: 1
- "3D": 1
- “Sub/Road”: 2

Circle mask

NOTE	**During initial installation, click <Default> and <Save>.**

- “Radius”: 508
- “Circle Mask Display”: on
  - ➪ A switch to "transparent" can be made for service purposes.

Hardcopy configuration

NOTE	**If the parameter “Hardcopy button sends image to film task card” is not set on the Codonics printer, this can lead to a malfunction if the print-out is initiated from the base unit.**

NOTE	**If “Hardcopy button sends image to film task card” is deselected, printing starts immediately after the "Hardcopy" button is pressed. Fluoroscopy will be blocked during this period.**

- “Hardcopy button sends image to film task card”: ☑
  - ➪ On the USB printer, “Hardcopy button sends image to film task card” can be deselected at the customer's request.

NOTE

In the main system service pages, you must press the “Enter” key after entering a parameter.

When this is done, the "Save” button is displayed.

NOTE

Depending on the progress of the configuration, the “Next” button can also be displayed as the “Finish” button.

Configuration

Main system

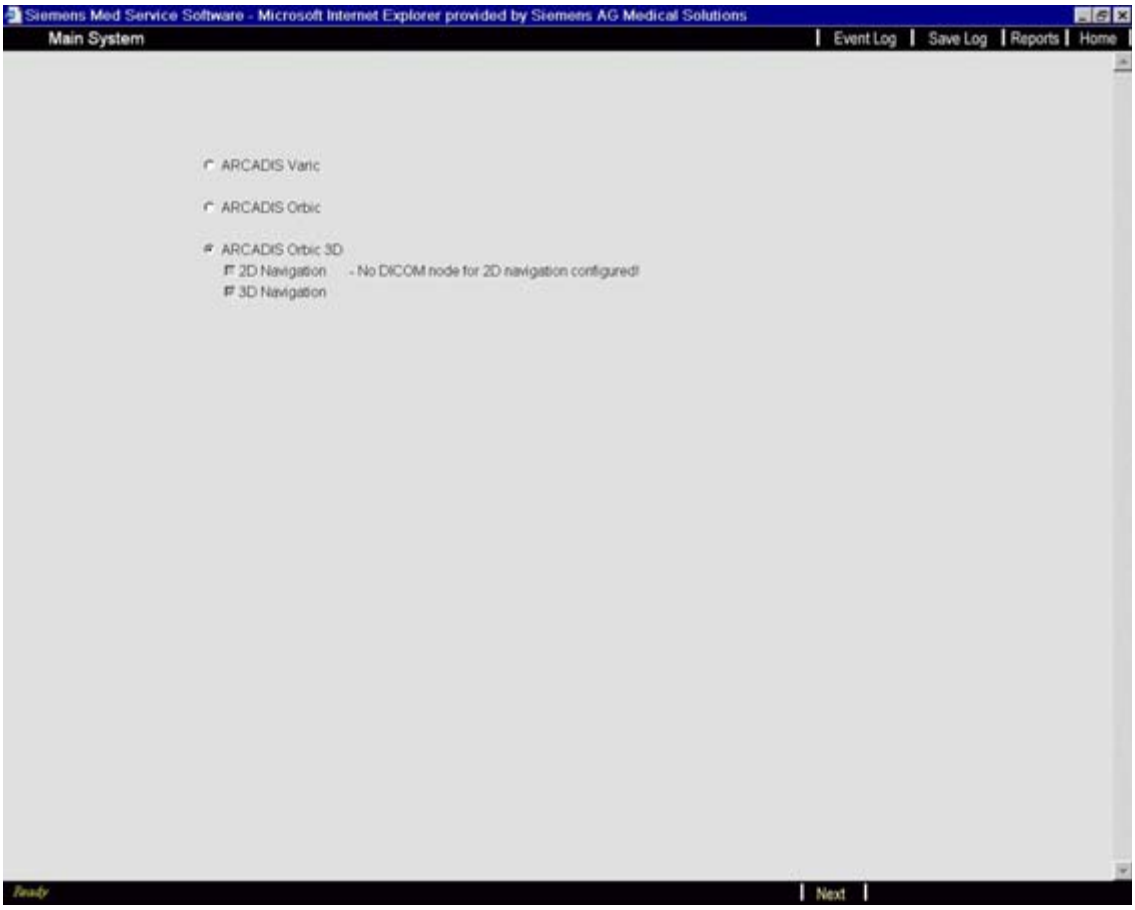


Fig. 44: ARCADIS main system

- Select the present system.
  - ➪ The selections are ARCADIS Varic, ARCADIS Orbic or ARCADIS Orbic 3D.
  - ➪ ARCADIS Orbic displays whether 2D navigation is available and configured.
  - ➪ ARCADIS Orbic 3D displays whether 2D navigation is available and configured, or whether 3D navigation is available and configured.

NOTE

After the main system configuration is complete, configure 2D navigation as described in "ARCADIS System 2D Navigation SPR2-310.814.02.xx.xx."

After the main system configuration is complete, configure 3D navigation as described in "ARCADIS System 3D Navigation SPR2-320.814.03.xx.xx."

NOTE

For an ARCADIS Orbic 3D, follow the instructions in "ARCADIS Orbic 3D".

System type

- Check to make sure that the correct system type is displayed here.
  - ➪ Depending on the system, "ARCADIS Varic” or "ARCADIS Orbic” can be displayed here.

Serial no.

- Enter the system serial number.

Enable internal tests

- “No” = Default
  - ➪ "Yes” is required only by the Engineering Department.

Log old messages

- "Yes” = Default

Load counter

New SERIAL no., single tank

- Enter the serial number of the "Single Tank”.
  - ➪ This can be found on the "Single Tank” housing.

Options

Laser

- If a laser is configured, select "yes”.

Diamentor

Diamentor configured

- If a Diamentor is configured, select "yes”.

Constant

- PTW chamber / TW factor -> refer to the sticker on the chamber.
- Wellhöfer / TW factor -> Enter the test value from the chamber test.

Resolution

- PTW DAP = “1.0 cGy cm*cm/pulse"
- Wellhöfer DAP = “0.01 cGy cm*cm/pulse"

Current limitation

NOTE

The “tube current limitation” is required only for Denmark. The required setting is performed during startup.

Tube current limitation

Max. mA limit

- “40” = Default

  ➪ This value is in effect only if “Lock kV-Buttons” has been set to "yes".

Lock kV buttons

- “No” = Default

Buzzer

NOTE

The required setting is country-specific and is therefore made during start-up.

NOTE

In the main system service pages, you must press the "Enter" key after entering a parameter.

When this is done, the "Save" button is displayed.

NOTE

Depending on the progress of the configuration, the "Next" button can also be displayed as the "Finish" button.

Configuration

Main System

- Select “ARCADIS Avantic - 33cm (13 inch) Image Intensifier”.

NOTE	**If 2D navigation is connected to the system, 2D configuration should be carried out following the main system configuration according to the document “ARCADIS System 2DNavigation SPR2-310.814.02.xx.xx.” .**

System type

- Check to make sure that the correct system type is displayed here.

Serial no.

- Enter the system serial number.

Enable internal tests

- “No” = Default
  - ➪ "Yes” is used only for the R & D Department.

X-ray disable

- “No” = Default

Foot switch CFC

- Select "Right" or "Left", depending upon whether the CFC should be released by the right or left foot pedal.
  - ➪ Pay attention to the text on the footswitch.

Image Intensifier

New serial number I.I.

- Enter the serial number of the I.I.
  - ➪ This can be found on the I.I housing.

Full format diameter

- “300” = Default

Zoom 1 diameter

- “215” = Default

Zoom 2 diameter

- "160" = Default

Zoom 3 diameter

- "120" = Default

SID_JJA (FFA)

- "1000" = Default

GX at installation

- This value is taken from the I.I. protocol from when the image intensifier was first installed.
  - ➪ This entry is for information purposes only and has no bearing on the system itself.

Vignetting

- "0" = Default
  - ➪ Not used.

Load Counter

NOTE	**These values should only be changed on request from headquarters!**

New serial no. single tank

- Enter the serial number of the single tank.
  - ➪ This can be found on the single tank housing.
- Click on ">".

Load unit parameters

Power limit

- Power limit: "230"

Average power

Lower

- Red 1: "240" (W)
- Red 2: "270" (W)
- Limit: "300" (W)

Upper

- Red 1: “249” (W)
- Red 2: “279” (W)
- Limit: “309” (W)

- Click on ">".

Heat value

Lower

- Red 1: “17501” (Joule x10)
- Red 2: “19001” (Joule x10)
- Limit: “20501” (Joule x10)

Upper

- Red 1: “17549” (Joule x10)
- Red 2: “19049” (Joule x10)
- Limit: “20549” (Joule x10)

- Click on ">".

Drive parameters

- Drive on: “4”
- Drive adj.: “4”
- Stop delay: “5”

Options

Laser

Laser existing

- If a laser is configured, select "yes”.

Dose Area Product

DAP chamber present

- If a Dose Area Product chamber is present, select "yes”.

Constant

- Wellhöfer / TW factor -> Enter the test value from the chamber test.

Resolution

- Wellhöfer DAP: “0.01 cGy cm*cm/Pulse”

Diaphragm

Power On Pos

- “+90 DEGREE” = Default

Current Limitation

NOTE	**The "Tube Current Limitation” is required only for Denmark. The required setting is performed during startup.**

Manual dose rate control

Max. mA limit

- “40” = Default

  ➪ This value is in effect only if “Lock kV-Buttons” has been set to "yes".

Lock kV buttons

- “No” = Default

Buzzer

Buzzer Settings

- Buzzer mode during x-ray: “BUZZER off” = Default

Blocktime Settings

- Warning time limit: “50” (min/10) = Default
- Blocking time limit: “50” (min/10) = Default

NOTE	**50 (min/10) corresponds to 5 minutes.**

NOTE

- **Steps to be performed are preceded by a bullet point.**
  - **Indented text under the activity to be performed contains general information.**
    - ➪ **Results and events are indented and preceded by an arrow.**

NOTE

Once the "Save" button has been selected in the individual screens, the message "..... successfully saved" appears following a successful save. Please:

- **Select "OK".**

NOTE

Depending on the progress of the configuration, the "Next" button can also be displayed as the "Finish" button.

NOTE

If 3D navigation is being performed with this system, a DICOM node must be configured before the 3D calibration.

This process is described in the section "ARCADIS Orbic 3D with navigation".

3D Adjustment

Potentiometer

Orbital potentiometer adjustment

- Select "Potentiometer".

- Move the C-arm into the position shown in the illustration (Angulation 0°, Orbital -95°).
- Click "Go".
  - ➪ The value for the potentiometer is displayed under “Current value”.
  - ➪ “Success” or “Error” is shown under “Status”.

Success

- If “Success” is displayed, click “>”.

Error: the value does not lie within the tolerance.

- If “Error” is displayed, remove the cover for the 3D drive.
- Loosen the Allen screw on the potentiometer.
- Use a screwdriver to turn the potentiometer counterclockwise to the end position.
- Now turn the potentiometer clockwise (back) 2 turns with the screwdriver.
- Tighten the Allen screw on the potentiometer again.
- Click "Go".
- If “Success” is displayed, click “>”.
- If the status “Error” is displayed, look for other defects.

Angulation potentiometer adjustment

- Move the C-arm into the position shown in the illustration (Angulation 0°, Orbital -95°).
- Click "Go".
  - ➪ The value for the potentiometer is displayed under “Current value”.
  - ➪ “Success” or “Error” is shown under “Status”.

Success

- If “Success” is displayed, click “Save”.

Error: the value does not lie within the tolerance.

- If “Error” is displayed, remove the cover from the cable module.

- Remove the angulation potentiometer holder completely.
- Turn the lead weight towards the right.
- Click "Go".
- If the status “Success” is displayed, click “Save”.
- If the status “Error” is displayed, turn the weight to the left.
- Click "Go".
- If the status “Success” is displayed, click “Save”.
- Reinstall the complete angulation potentiometer holder.
- Click "Go".
- If the status “Success” is displayed, click “Save”.
- If the status “Error” is displayed, look for other defects.

Orbital movement

Adjustment of the orbital movement

- Select "Orbital movement".
- Move the C-arm into the position shown in the illustration (Angulation 0°, Orbital -90°).
- Make sure the C-arm is clear of obstacles.
- Click "Go".
  - ➪ The C-arm starts automatically.
  - ➪ “Running” is displayed under “Status”.
  - ➪ If the C-arm is moved to the limit switch, “Success” is displayed.

Success

  - ➪ When “Success” is shown, the value is saved automatically.
- Click “Finish”.

Error

- If the status “Error” is displayed, look for defects.

Reconstruction region

Adjustment of the reconstruction region

- Select "Reconstruction region".
- Move the C-arm into the position shown in the illustration (Angulation 0°, Orbital+95°).
- Make sure the C-arm path is clear of obstacles.
- Make sure no objects are in the X-ray beam path.
- Click "Go".
  - ➪ “Running” is displayed under “Status”.

- Press the left footswitch.
  - ➪ The C-arm starts automatically.
  - ➪ A value is displayed under “Reconstruction Range for Angulation 0°”.
  - ➪ “Success” is displayed under “Status”.
- Release the left footswitch.

- Move the C-arm into the position shown in the illustration (Angulation 180°, Orbital +95°).
- Make sure the C-arm path is clear of obstacles.
- Make sure no objects are in the X-ray beam path.
- Click "Go".
  - ➪ “Running” is displayed under “Status”.
- Press the left footswitch.
  - ➪ The C-arm starts automatically.
  - ➪ A value is displayed under “Reconstruction Range for Angulation 180°”.
  - ➪ “Success” is displayed under “Status”.
- Release the left footswitch.
  - ➪ When “Success” is shown, the value is saved automatically.
- Click “Finish”.

NOTE	**This completes the adjustment of the ARCADIS Orbic 3D.**

3D calibration

NOTE

For 3D navigation, a DICOM node must be configured before calibration. This process is described in the section "ARCADIS Orbic 3D with navigation".

Orbic 3D

- Select "Orbic 3D".

- Position the calibration phantom in the isocenter of the C-arm.
  - Use a laser light localizer, if available.
  - If laser light localizer is not available, adjust with fluoroscopy.
- Move the C-arm into the position shown in the illustration (Angulation 180°, Orbital +95°).

System was already calibrated.

- Click "Go".
  - ➪ "Last successful calibration was on ..." is displayed.
- Click “OK”.

System is calibrated for the first time.

- Click "Go".

Continue with:

- Press the left footswitch and hold.
  - ➪ The calibration starts automatically.
  - ➪ The first 4 calibration steps are performed.
- If “Error” is displayed, check the position of the calibration phantom.
  - If “Error” is still displayed, other causes of error must be checked, e.g. the 0° setting of the camera.
- If “Success” is displayed, move the C-arm into the position shown in the illustration.
- Position the calibration phantom in the isocenter of the C-arm.
- Click "Go".
- Press the left footswitch and hold.
  - ➪ The calibration starts automatically.
  - ➪ The next 4 calibration steps are performed.
  - ➪ If “Success” is shown, the value is saved automatically.

Error

- Repeat the calibration procedure.
- Restart the system and repeat the calibration procedure.

Recalibration of single step

NOTE	**Recalibration of a single step is possible.**

- Select the desired step by double-clicking the appropriate text.
- Click “Go” to recalibrate or “Finish” to exit calibration without recalibrating.

Calibration with a navigation system

NOTE	**If a DICOM node was configured for 3D navigation, the name entered is displayed under 3D Calibration. This example uses "Brainlab".**

NOTE	**Select the name under "3D Calibration" and perform the calibration as described at this beginning of this section.**

NOTE	**This concludes the 3D calibration.**

3D Navigation

Configuring a DICOM node

- Open the service software.
- Click "Configuration".
- Click "Next".
- Under "DICOM", select "Network nodes".

Fig. 45: DICOM_Networknodes_2

Select Host.

- Under "Select Host", select "Define new".

Host name

- Enter Host name.

TCP/IP address

- Enter the IP address.

Connected by

- Select "LAN".
- Select "Save".
- Select ">".

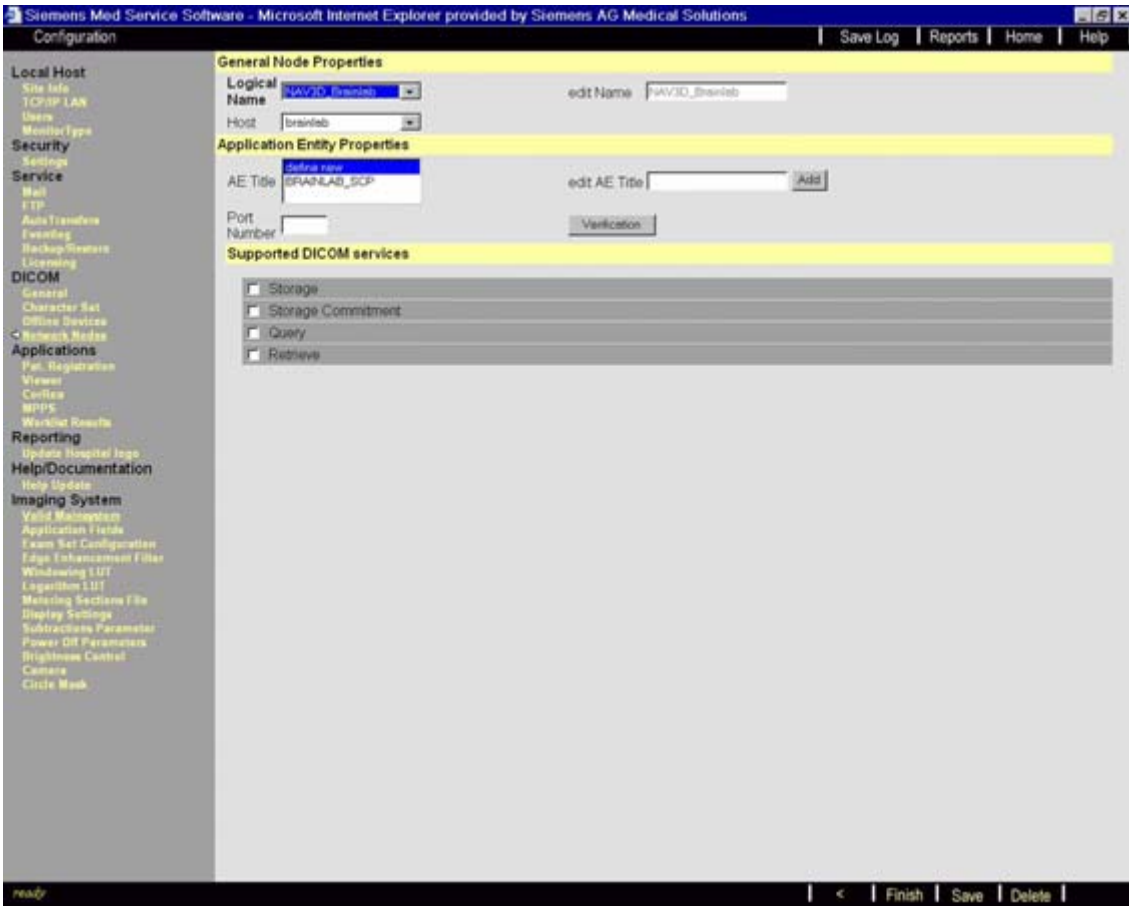


Fig. 46: DICOM_Networknodes_3

General node properties

Logical name

- Select "Define new".

Editing the name

- Under "Edit name", enter the name for the navigation system. For 3D navigation, the name must be structured as follows: NAV3D_xxxx, replace xxxx with the name of the navigation manufacturer.

NOTE	**The logical name must begin with NAV3D_. This ensures that this name is displayed under 3D Calibration in main system service.**

Host

- Under "Host", select the name entered on the previous page.

Application entity properties

AE title

- Select "Define new".
  - ➪ The already configured AETs are shown in the pull-down menu.

Editing the AE title

- Enter a name in the "Edit AE title" field.

Port number

- Enter the port number for the DICOM device.
- Click "Add".
- Do **not** select Verification.

Supported DICOM services

Storage

- Select "Storage".
- Do not make any changes under "Storage".

Storage commitment

- Do not select.

Query

- Do not select.

Retrieve

- Do not select.
- Click "Save".
  - ➪ A message appears indicating that the system must be restarted.
- Click "OK".
  - ➪ The system is restarted.

NOTE	**This concludes “ARCADIS Orbic 3D with navigation”.**

Backup of parameter changes

NOTE **After the parameters have been changed, a backup must be performed.**

NOTE **The monitor trolley and the basic unit must be connected. (Plug X10 is connected to socket X10.)**

1. Switch on the system and wait till it has booted.
2. Open the local service.
3. Insert an empty CD-R into the DVD drive.
4. Select “Command” and “Backup”.
5. As backup drive, select “(R) CD-R” in the “Drives” list field.
6. Perform a backup of the following packages:
   - ➪ SW settings 02
   - ➪ ASPIA Settings
   - ➪ 3D Reconstruction settings (only for ARCADIS Orbic with 3D reconstruction)
   - ➪ Exam Set
   - ➪ Security settings (optional)
   - ➪ Main system
7. After the backup, remove the CD-ROM from the DVD drive, write the system name, system serial number, date, and time on the CD-ROM, and insert it into the system logbook.

NOTE **If the system is connected to a network, the following checklist must be filled out and filed in the system binder.**

Person responsible for network configuration at customer site

	Name:	
	Phone/fax:	
	E-mail:	

System network data

	Identification:		Enter under:
	Computer name		* Configuration/local host/TCP IP address
	IP address:		
	TCP/IP address		* Configuration/local host/TCP IP address
	Subnet mask		* Configuration/local host/TCP IP address
	Gateways		* Configuration/local host/TCP IP address
	General: Local AE title for:		
	HIS/RIS		* Configuration/DICOM/general
	Study transfer		* Configuration/DICOM/general
	Print		* Configuration/DICOM/general

	Remarks:		

Network data for HIS/RIS network partner (only with HIS/RIS option)

	Available	Yes	No
	Product:	Version:	Manufacturer:
	Host properties:		
	Host name		* Configuration/DICOM/HIS RIS nodes
	TCP/ IP address		* Configuration/DICOM/HIS RIS nodes
	General node properties		
	Logical name		* Configuration/DICOM/HIS RIS nodes
	Application entity		
	AE title		* Configuration/DICOM/HIS RIS nodes
	Port number		* Configuration/DICOM/HIS RIS nodes
	Remarks:		

Network data for reporting console/archiving system

	Available	Yes	No
	Product:	Version:	Manufacturer:
	Host properties:		
	Host name		* Configuration/DICOM/network nodes
	TCP/ IP address		* Configuration/DICOM/network nodes
	General node properties:		
	Logical name		* Configuration/DICOM/network nodes
	Application entity:		
	AE title		* Configuration/DICOM/network nodes
	Port number		* Configuration/DICOM/network nodes
	Supported DICOM services:		
	Storage	Yes No	* Configuration/DICOM/network nodes
	Storage commitment	Yes No	* Configuration/DICOM/network nodes
		Node name:	* Configuration/DICOM/network nodes
	Query	Yes No	* Configuration/DICOM/network nodes
	Retrieve	Yes No	* Configuration/DICOM/network nodes
	Remarks:		

Network data for reporting console/archiving system

	Available	Yes	No
	Product:	Version:	Manufacturer:
	Host properties:		
	Host name		* Configuration/DICOM/network nodes
	TCP/ IP address		* Configuration/DICOM/network nodes
	General node properties:		
	Logical name		* Configuration/DICOM/network nodes
	Application entity:		
	AE title		* Configuration/DICOM/network nodes
	Port number		* Configuration/DICOM/network nodes
	Supported DICOM services:		
	Storage	Yes No	* Configuration/DICOM/network nodes
	Storage commitment	Yes No	* Configuration/DICOM/network nodes
		Node name:	* Configuration/DICOM/network nodes
	Query	Yes No	* Configuration/DICOM/network nodes
	Retrieve	Yes No	* Configuration/DICOM/network nodes
	Remarks:		

Instructions for renaming a DICOM node added in chapter 4.